THE BUILDER

Incorporating

ARCHITECTURE & THE BRITISH ARCHITECT

THE BUILDER HOUSE, CATHERINE STREET, ALDWYCH, LONDON, W.C.2. Telephones: Temple Bar 6251-2-3-4

VOL. CLXXXIV APRIL 10, 1953 No. 5747

PRINCIPAL CONTENTS

ARTICLES — PAGE

ROYAL GOLD MEDALLIST, 1953: RIBA Presentation to Le Corbusier 556
UNITÉ D'HABITATION: Lawsuit 557
TROPICAL ARCHITECTURE: UCL Conference 558
CORRESPONDENCE 560
OBITUARY 569
HOUSING PROGRESS REPORT: Figures for February 569
1953 ECONOMIC SURVEY .. 570
SOCIETIES 570
MODULAR CO-ORDINATION: RSA Discussion .. 571
FURNISHINGS: DIA Exhibition 572
COLOUR IN SCHOOLS: MOE Bulletin 572
SAFETY IN BUILDING: Factory Inspector's Report .. 572
TENDERS FOR GREATER LONDON BUILDING: Reference to Monopolies Commission 573
IN PARLIAMENT 573
SOME ASPECTS OF BUILDING CONTRACTS—5 .. 575
TENDERING PRACTICE .. 576
BUILDING RESEARCH CONFERENCE 576
LIGHTWEIGHT CONCRETE 577
BUILDERS' BENEVOLENT INSTITUTION: Annual Dinner 578

ILLUSTRATIONS

CURRENT ARCHITECTURE IN THE SUDAN: Civic Centre and Girls' School, Omdurman 561
RESIDENTIAL CLUB FOR OLD LADIES, NORTH KENSINGTON: By Hastie, Winch and Kelly 564

THIS WEEK'S NEWS

SEVERAL TRIBUTES were paid to M. Le Corbusier by Mr. Howard Robertson and others when he was presented with the Royal Gold Medal for 1953 *at the RIBA on March* 31. *p.* 556

"I THINK that we shall not be near the solution of tropical building problems until there has been built up an architectural profession from amongst the people of the territories themselves, for only they can have the intimate touch, the almost unconscious understanding of what is really needed," said Mr. C. Y. Carstairs, Assistant Under-Secretary of State, Colonial Office, when he spoke at the Conference on Tropical Architecture in London on March 23. *p.* 558

THE SUPPLIES OF BUILDING MATERIALS are expected to improve further in 1953 *according to the "Economic Survey for* 1953," *which was published as a White Paper last week. More building steel should also be available. p.* 570

"THE PREREQUISITE to successful modular co-ordination is a common attitude of mind; the quickest way to establish that and resolve differences is for a small team, representing all view-points, to engage in a realistic study of actual buildings," said Mr. S. Johnson-Marshall, in a discussion on "Modular Co-ordination" which took place at the Royal Society of Arts recently. p. 571

THE MONOPOLIES COMMISSION are to consider certain practices relating to building tenders in the Greater London area under Section 6 (2) *of the Act, which means that their report will deal strictly with the matter remitted to them, and not with other restrictive practices which may be brought to their attention. p.* 573

AS A RESULT of the appeal made by Mr. Edwin McAlpine, this year's president of the Builders' Benevolent Institution, a record sum of £3,000 has been received by the Institution. p. 578

GETTING TOGETHER

A CONSIDERABLE number of people consider that the architectural schools no longer produce the results which the profession and the building trade require. In some cases this is because the school syllabus is not the best which could be devised to meet present-day needs. The trouble, however, is not just as simple as that.

The schools started with the atelier system of the Ecole des Beaux Arts of Paris, upon which the architectural education systems both of this country and of the USA were founded. The essence of that system was that practising architects of standing ran small individual part time or evening schools where they taught design. The students worked in architectural offices, where they gained their knowledge of practical construction and of all the processes involved in translating a sketch design into a real building. The morale of these early schools was high, the appetite of their students for hard work enormous and the system produced many architects of distinction. At all times the student was a useful member of the building community.

The present-day schools of architecture have travelled a long way from that beginning. Their size is enormous by comparison. Out of that a teaching profession has arisen. They are for the most part no longer staffed by practising architects of standing; the staffs apart from Principals often have little more experience of the responsibility of building than the students, and the students emerge at the end of their courses with little understanding of the processes involved in the creation of actual buildings and with no great ability to assist in these processes. They are of very limited value to their architect employers. For five years they have been studying a profession whose job is to get buildings erected, but during that time they have been divorced from any responsibility for actual building. Not unnaturally, they are, almost without exception, eager to get "on the job"—to be sent to visit works in progress; but in that sphere they are not equipped to be of much use either to their architect employers or to the builder. They are ignorant about building.

Sadly, the students have now arrived at an age when it is more difficult for them to learn from the men on the job the simple things of building craftsmanship. A workman will generally tell more to a youth who knows nothing and has no need to pretend otherwise than he will to a graduate who ought to know more but doesn't.

Basically this sorry state of affairs can only be remedied by restoring early experience in office and on the site and by maintaining this throughout the students' training. A return to pure office pupilage would be retrograde and impracticable. The sandwich system, practised in Scotland for many years, and advocated by Richard Neutra of California during a visit to this country since the war, seems to offer the best means of making the student's training a balanced progression. There is scope for the expression of opinion about the best proportions for the ingredients of the sandwich. Fairly equal slices of practical and school work would probably be best, and would certainly do most to re-establish mutual respect between students and employers. For to-day the employer often regards students as little more than encumbrances about the office, not because of the little the student knows, which in itself is no fault, but because the student in turn often has a great secret contempt for the employer, regarding him as old-fashioned and out of touch with the slick self-contained world of the school.

Alternating experience in architectural offices and schools sets a framework within which the student may acquire a balanced knowledge of his job, but does not fill the frame completely. Architects must constantly observe the processes of building and of the craftsmanship which go into buildings, and be conscious of the " feel " and texture and all phsyical characteristics of the materials they use. Here students must help themselves a great deal more than they commonly do ; they must be inquisitive without being a nuisance ; they should never pass a building site without noticing minutely what is going on. During their first few years they will meet on drawings and in text books hundreds of terms, materials and components entirely new to them, and utterly unreal until they have seen them in the flesh with their own eyes, and until with their own intelligence they have puzzled out and pondered the whys and wherefores.

Later—after qualifying is probably best—every architect should spend a period on a building site in some capacity or another. But that is no substitute for continuous observation from time to time of what happens on the site. And if that is done, then when an architect does spend a continuous period on a site, and at all later times in the course of his ordinary work, it will be found that there is mutual respect growing between architect and builder.

It is not suggested that there is any real lack of respect at present between these two parties. Yet it is beyond question true that closer understanding should lead to more efficient building. If it is true that greater respect between architectural students and their architect employers could be gained by closer contact at an early stage in the students' career, the same should be true as between architectural and building students. At this point someone will be heard groaning that the student has no more time, that the school syllabus is already full. But is it full of the right sort of things ?

It is true that in some architectural schools the first year is partly spent in drawing patterns, putting together bits of coloured cardboard, and making models of huts for desert islands. There are others, however, where the student spends his first year studying the arts in the liberal sense of the word along with other students who are intended for different vocations altogether, and again there are others where architects, engineers of all kinds, chemists and naval architects spend their first year doing pure and applied science together. There is obviously no dogma applicable to what the architectural student should do with his first year.

Why not try spending it with potential builders ? We have talked so far about the present failings of architectural education, and in all too brief a manner. For in harping on the failings we may have given the impression that we are unconscious of the tremendous good that has been done, or ungrateful for it, which would be far from true. But we have talked not at all about the training of builders, and yet they have even more cause than architects to be uneasy about training those within their ranks and those entering them.

We have not done so because all we want to do really is to put forward an idea which might have the makings of much good in it. Why should not builders and architects spend the first year of their training together, studying subjects which are to be of fundamental use to them throughout their respective careers ? There is no magic about the first year as such. It could be any other year. It might be more than one year. Or it might be parts of several years. But if there is no magic in the first year, at least the sooner they get together the better.

And if we have talked more about architects than builders, it is mainly because the architects have an established system of education upon which such a scheme could be grafted. As they have been willing in the past to experiment in consorting with intended school teachers, economists, and scientists, perhaps they might be persuaded that more practical good would come out of getting together with builders at the beginning.

MONOPOLIES AND BUILDING

THOSE who have been anxious to have examined by the Monopolies Commission the methods by which the London Builders' Conference has been operating its policy of adjusting tender prices, may now realise their wish, for the President of the Board of Trade (as briefly reported last week) has referred to the Commission " certain tendering practices " which undoubtedly include the operations of the Conference. The Commission are first to find out if the conditions to which the Monopolies and Restrictive Practices Act, 1948, applies do in fact prevail ; if so, then whether the exchange and adjustment of prices by agreement with someone other than the person asking for the tender take place ; and then, if they find that such exchange and/or adjustment are done, to report whether such " operate or may be expected to operate against the public interest."

This inquiry is the first of the 14 so far referred to the Commission to be brought under Section 6 (2) of the Act. In previous references requiring a report on public interest, it has been the Commission's duty to report comprehensively on this aspect of the conditions and practices found to prevail in the industry concerned ; under section 6 (2) procedure the Commission—once they have established that the conditions prevailing in the industry are such as to bring it within the scope of the Act—are to report on the " public interest " aspect only of the particular practices specified in the reference.

The meaning of this is that the Commission—should it decide there is a condition of monopoly—will not be required to take the industry to pieces but will confine their attention strictly to the subject of " certain tendering practices." Examination of other restrictive or monopolistic conditions, actual or alleged, would be undertaken, we understand, solely in so far as it might affect the main subject of the inquiry.

No doubt this step has been taken in order to speed up the Commission's report which, if precedent is any guide, will take about a year. Yet in some ways it is disappointing, for the likelihood that the Commission might, in fact, make these additional inquiries could have been a redeeming feature of this tedious dispute, for there has recently been an increasing volume of public criticism of methods of price fixing by trade associations and the consequent reduction of competition. It would have been well that the pros and cons of an admittedly difficult question should be set out by an impartial body such as the Commission, and if one result of the inquiry should have been to throw the spotlight of publicity upon manufacturing associations which operate " rings " less with the idea of creating stable manufacturing conditions than of making inordinate profits, then the inquiry would have been even more widely welcomed. It is a good maxim that nothing which is bad for the country can, in the long run, be good for the building industry and such associations, if they exist, should know that neither country nor industry can afford them.

NOTES & NEWS

LE CORBUSIER HONOURED

FEW can recall such a large gathering as assembled at the Royal Institute of British Architects on March 31 to see M. Le Corbusier receive the Royal Gold Medal for Architecture, 1953, and indeed the numbers of those present accorded well with the warmth of the reception given to him. Glowing tributes were paid to M. Le Corbusier before the investiture, and the walls of the Henry Jarvis Hall can seldom have echoed to more numerous, or more sincerely meant, superlatives.

The versatility of M. Le Corbusier for his accomplishments not only within the field of architecture and town planning but as poet, author and philosopher was emphasised in tributes by M. Claude Lebel (deputising for the French Ambassador), Mr. Robert Matthew, CBE, ARIBA, architect to the LCC, Sir Herbert Read, Mr. Wells-Coates, FRIBA, and Mr. Colin Glennie, architectural student.

After receiving these tributes, M. Le Corbusier was escorted to the platform to receive the Medal from the hand of the President, Mr. Howard Robertson, ARA, by two past Royal Gold Medallists, Mr. Edward Maufe, RA, and Dr. Charles Holden.

Speaking in French, M. Le Corbusier then described his many years of struggle and frustrations with an ironical humour that caused many smiles. The less expert linguists wished he could have spoken in English, for his habit of dropping his voice caused a number of sentences to be lost to them, but fortunately not to the official shorthand writers, as our fuller account of M. Le Corbusier's remarks on page 556 shows.

The occasion was a great "turn out" for architects, both old and young, and those who glimpsed him in the crush were particularly gratified to note that last year's Gold Medallist, Mr. G. Grey Wornum, FRIBA, was able to be present.

"CORB" AT THE AA

AFTER THE RIBA, the AA, who entertained the Royal Gold Medallist to dinner on April 1. As the President, Mr. A. R. F. Anderson, laid down, there were no speeches, but only a welcome (expressed in felicitous French by Mr. Gontran Goulden) and a response by the guest of the evening in which a number of good remarks were made. The prize winner, perhaps, coming from an architect who has done more speaking and writing about architecture than anyone of this generation was "Architecture is something to be done, not to be talked about!" Le Corbusier disclaimed "the extraordinary titles" (Commander of the Legion d'Honneur and Royal Gold Medallist) which had been conferred on him and insisted on the importance of friendship—"friendship between the men and women who meet together in the search for what will satisfy the modern conscience."

At the AA, Le Corbusier obviously found himself speaking on the same wavelength as his audience, and the President's action, at a later stage in the evening, in embracing "Corb" soundly on both cheeks and at the same time telling him that his architecture was not his (the President's) exact cup of tea, was all in keeping with a frank and happy evening!

LCC ARCHITECTS' PANEL

AS ANNOUNCED in our last issue, the London County Council is inviting applications with a view to forming a new panel of architects in private practice to carry out educational building projects on behalf of the Council.

The Council normally allocates part of its building programme each year to private architects, and over 100 schemes, ranging from minor additions to the erection of new secondary schools costing over £500,000, have been placed in the hands of architects in private practice since the first panel was formed in 1947. The total value of these schemes is over £4 million.

Application forms giving details of the panel may be obtained from the Clerk of the Council at County Hall, SE1, and should be returned by April 24.

VISUAL EDUCATION

SIR HUGH CASSON, RDI, FRIBA, will be the guest speaker at the annual meeting of the Council for Visual Education which is to be held at the Housing Centre on April 15. The title of his address, "Architecture and the Decorative Arts," allows ample scope for a speaker whose originality of thought and aptly phrased humour is always well received.

CONWAY CASTLE AND WALLS

CONWAY CASTLE AND TOWN WALLS, which are owned by the Borough of Conway, are considered the finest surviving example in Britain of a medieval fortified town. They have, however, suffered considerably from neglect, and to some extent from injudicious treatment, and their condition causes concern.

COMING EVENTS

MONDAY, APRIL 13

ECCLESIOLOGICAL SOCIETY.—"The First Christian Church?—Discoveries at Lullingstone," by Mr. C. D. P. Nicholson, FSA. 2, Bloomsbury-square, WC1. 6 p.m.

RIBA (LIBRARY GROUP).—Meeting devoted to the work of Ernest Newton, RA (1856–1922). 66, Portland-place, W1. 6 p.m.

RICS.—"Modern Housing Construction," by Mr. R. W. Wates. 12, Great George-street, SW1. 5.30 p.m.

TUESDAY, APRIL 14

INSTITUTION OF SANITARY ENGINEERS.—"Cathodic Protection of Buried and Submerged Pipe-lines," by Mr. K. A. Spencer. Caxton Hall, Westminster. 6 p.m.

WEDNESDAY, APRIL 15

RICS (QUANTITY SURVEYORS).—"Quantities and Qualities," by Mr. Richard Sheppard, FRIBA. 12, Great George-street, SW1. 6 p.m.

COUNCIL FOR VISUAL EDUCATION.—Annual meeting and address by Sir Hugh Casson on "Architecture and the Decorative Arts." Housing Centre, 13, Suffolk-street, Haymarket, SW1. 2.15 p.m.

SOLID SMOKELESS FUELS FEDERATION. — Fuel Efficiency and Smoke Abatement Exhibition. Charing Cross Underground Station.

ELECTRICAL ASSOCIATION FOR WOMEN.—Twenty-eighth annual conference. Connaught Rooms, Great Queen-street, WC2. 10.30 a.m.

THURSDAY, APRIL 16

INSTITUTION OF HEATING AND VENTILATING ENGINEERS.—"Panel Heating: Some Practical Applications," by Mr. H. H. Bruce. Institution of Mechanical Engineers, Storey's Gate, SW1. 6 p.m.

SOCIETY OF CHEMICAL INDUSTRY.—AGM. Building Centre, Store-street, WC1. 6 p.m.

A.A.—Annual reception. 34, Bedford-square, WC1. 8.30 p.m. until 1 a.m.

INSTITUTION OF STRUCTURAL ENGINEERS.—"Economy in the Use of Structural Materials," by Messrs. G. A. Gardner, L. R. Creasy and R. Morton. 11, Upper Belgrave-street, SW1. 6 p.m.

"Some fool must have left the door open!"

The castle and walls are listed by the Ministry of Works and thus protected under the Ancient Monuments Acts. Negotiations between the Ministry and the borough of Conway about the preservation of the monument have been in progress for some years: the Ministry have been willing to accept an offer by the borough of Conway to place the monument in the Minister's guardianship under the Ancient Monuments Acts; this would have made the Ministry responsible for the upkeep of the castle and walls and enabled a systematic programme of restoration to be put in hand at Government expense. The Conway authorities have, however, declined to offer guardianship to the Ministry.

The Conway Corporation should make haste to conclude the negotiations, for the condition of the castle and walls is giving rise to increasingly serious concern.

DEPUTY ARCHITECT, SOUTHEND

THE County Borough of Southend-on-Sea invite applications, by April 25, for the post of Deputy Borough Architect. Salary £1,050 x £50 to £1,250 per annum. Details advertised elsewhere in this issue.

PROFESSIONAL ANNOUNCEMENTS

MR. J. D. TETLOW, BArch, ARIBA, AMTPI, formerly Area Planning Officer, Staffordshire County Council, has joined MRS. B. Y. TETLOW, DiplArch, ARIBA, AMTPI, in private practice. They will practice under the style of MESSRS. J. D. and B. Y. TETLOW, at 31, Townfields, Lichfield, Staffs. (Tel.: 3003.)

MESSRS. E. R. BABBS AND SONS, wish to announce that they have removed their offices to 187, Piccadilly, W1. Telephone numbers remain unchanged.

FROM "THE BUILDER" OF 1853

Saturday, April 9, 1853

EDINBURGH.—By the exertions of the Society of Antiquaries of Scotland, the ancient chapel of St. Margaret, in the Castle, formerly used as a powder magazine, has been restored, under the superintendence of Mr. Grant. The small round-headed windows in the south and west walls have been filled with stained glass by Messrs. Ballantine and Allan. This chapel is said to be the oldest building in Edinburgh, dating at the latest from the middle of the twelfth century.

The Royal Gold Medallist, 1953

PRESENTATION TO M. LE CORBUSIER AT THE RIBA

THE Henry Jarvis Hall at the Royal Institute of British Architects, 66, Portland-place, W1, was filled to capacity on Tuesday evening, March 31, for the presentation to Monsieur Le Corbusier of the Institute's Royal Gold Medal, 1953. The President, Mr. Howard Robertson, MC, ARA, SADG, FRIBA, was in the chair.

THE PRESIDENT said that on the recommendation of the Council of the RIBA, the Queen had approved the award of the Royal Gold Medal for 1953 to Monsieur Le Corbusier, of France. He need hardly say what an enormous pleasure it was to have Monsieur Le Corbusier with them this evening.

"There are two things which I should like to say about M. Le Corbusier," Mr. Robertson continued. "One is that his name is known and respected as an architect all over the world. To an extraordinary degree it is a household word. The other thing is that as an architect he has never been interested in what architects have to do to earn their living; he has earned his living, but he does not care about it. He would leave any job which did not interest him and refuse any work, however fat the fee, in order to do something which appealed to his artistic integrity. It is a tremendous thing for an architect to do that, and I think that it is about the highest compliment which I could pay him as a man."

M. CLAUDE LEBEL, who represented the French Ambassador, said that had M. Massigli been present he would very probably have told them how very wrong people were when they spoke of the insularity of the English, because the number of Gold Medals which had been accorded to foreigners was very remarkable, and proved in a remarkable way the interest which this country had and had always had in countries abroad and in what was happening there.

SIR HERBERT READ said: "I shall beg leave to speak very briefly about Le Corbusier the poet. Yes, M. Le Corbusier is a poet, a great poet. We all know that he paints pictures, and that if he had not been so busy as an architect he might have taken his place among the leading painters of our epoch. There is a close stylistic relationship between the paintings and the architecture; they are alternative expressions of the same spiritual harmony."

THE TOWN PLANNER

MR. ROBERT H. MATTHEW, CBE, ARIBA, said he had been asked to say something about M. Le Corbusier and town planning. It was no accident, he imagined, that Corbusier the Urbaniste and Corbusier the inventor of the Modulor were one and the same. "The relentless search for order," said Mr. Matthew, "the search for proportion and the discovery of its roots in the classical Golden Ratios, is the inevitable expression, to my mind, not only of his disgust at the pathetic disorder of our nineteenth and twentieth century towns, but also of his persistent belief—and this must be tremendously to his credit, in view of his own experience—in the possibility, if not the certainty, of the emergence of harmony in human affairs.

"For far too long Corbusier's town planning schemes, fertile, audacious—I would say revolutionary—for far too long these remained on paper, in the realm of theory. A window on new worlds, in the organisation of urban space, had been opened, and in the years between the wars the whole world—in so far as it was young, progressive and architectural—was drawn to his *atelier* in Paris.

"What they saw there—and they could see this nowhere else in the world—was nothing less than a new affirmation of the Rights of Man, the Rights of Man in terms of sun, light, space, quiet, trees and grass. The translation of this Book of Rights into architectural terms has, I imagine, been his constant work and recreation. The wonder is that, with so little opportunity before the war to put into practice his theory, a consistent development was possible at all. That this was so, however, is now a matter of history, as anyone comparing his early studies for *La Ville Radieuse* with, for instance, his post-war reconstruction schemes can immediately appreciate.

"To-day the situation is different, quite different. M. Le Corbusier is here, there and everywhere, advising, designing, creating, from India to New York and from South America to Marseilles. His life-long studies in the functions of the city are now put to the test of practical achievement, and everyone here will wish him well in his great work for the present and for the future. These studies, knitting together the technological possibilities of building with radical solutions to, among other things, the seemingly intractable problems of traffic circulation, have for long now been recognised as a fundamental contribution to twentieth century town planning technique. Even some of the world's largest bureaucracies have not been entirely impervious to these ideas."

"THE ARCHITECT'S ARCHITECT"

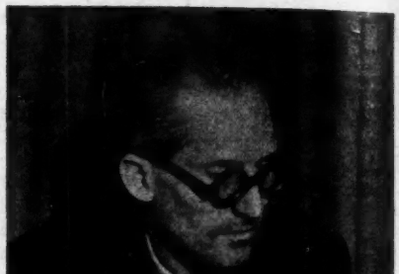
MR. W. W. WELLS-COATES, FRIBA, said, "It is a great privilege to be here to-day to speak in honour of M. Le Corbusier, the master whose disciple I have been for many years.

"Le Corbusier is known to us as a poet, a painter, a philosopher, a master architect and an outstanding leader of men. He is also a gay and inspiring companion and friend. But above all, I would name him an inventor, an innovator, a discoverer, the initiator of a new world of forms. Corbusier is the architect's architect. He is the prophet of new developments, the sure master of form, the prolific delineator of new terms and new themes in this transitional age for architecture. He has done more to consolidate our thoughts and inspire our actions than any other living man.

"This is no ordinary occasion," Mr. Wells-Coates added. "The Royal Gold Medal of the RIBA is not being presented to an ordinary man; it is to a great man who honours the honour bestowed upon him to-day."

THE DREAMER

MR. COLIN GLENNIE, a student at the Architectural Association School, said: "Le Corbusier is a dreamer. He is also one of the only truly practical men of our age. He understands the spirit of the twentieth century. It is not for him something from which to run away or something to be passively accepted with a shrug or a sigh. He has faced the problems that the vast changes which make our times so different from even those of 50 years ago have brought about. He has tackled them with courage, and he has gone far in solving many of them. For him everything is vital, and above all mankind is real, not a vague 'they' huddled hopelessly between inverted commas, who must be forced into accepting a special new style of architecture, trumped up to please the æsthetic sense of some artistic set, but a collection of men, women and children, each with their needs, each with their hopes, to whom must be given the opportunity of living—sun, space, verdure; not Doric, Ionic, Corinthian, nor flat roofs, corner windows, random rubble. The styles are alive, he has said, and he has proved it.



Le Corbusier

THE PRESIDENT: "Monsieur Le Corbusier must be feeling that he is never going to get his medal! But now the moment has come, and I will ask two Royal Gold Medallists, Mr. Edward Maufe and Dr. Charles Holden, kindly to conduct him to the platform to receive the Medal."

The President then, amid terrific applause, handed the Royal Gold Medal to Monsieur Le Corbusier.

Le Corbusier's Response

MONSIEUR LE CORBUSIER, speaking in French, said: Thank you. I offer my thanks to Her Majesty the Queen, who has been good enough to honour me in a way which moves me deeply and of which I am deeply appreciative.

I have listened with interest to the speeches which have been made, and I am conscious of the kindness shown to me in doing me this great honour. I wish to admit, what I think that you have recognised, that it is always the human being, man, that I have sought to study, not as a professional architect but as a discoverer, and also as a traditionalist. I have always had my feet in the past, and my head in the past too. My roots are in the past, though not in the Dark Ages of the academies. At the same time, I have tried to take a step towards the future. It has been my object always to be simple and direct, to be both an engineer and a poet.

After all these flowers which have been showered on me, I should like to try to show you another aspect of Le Corbusier, Le Corbusier as a *cheval de fiacre*. If to-night I am wearing this magnificent medal, it is because I was a *cheval de fiacre* for more than 40 years. During all that time I worked for all the days that God made, and often in the evenings as well, with one aim in view, to follow the truth and let my conscience be the judge of whether my work was good.

Before you presented me with all these bouquets, I received, like a true *cheval de fiacre*, many blows with a whip, but this did not alter my outlook or change my aims. I should like to tell you something about what happened to me, because it will perhaps show you at what a price one can perhaps succeed

in making something of one's life. In all my life of more than 60 years I have really only had one client, and that was for the *Unité d'Habitation* at Marseilles. I was asked, "Will you make a great building for these people?" and I replied, "Yes, on one condition, that I am not to be bound by any rules." They agreed, and so I started work on this building, which embodies a great many of my proposals for the modern town, the town of to-day. I was governed by the cosmic laws of space, by my respect and admiration for nature, by the needs of the family, and the recognition of the home as the fundamental unit of society and the hearth as the centre of the home. My work there has its roots in the past, in the Grande Chartreuse, which for 50 years has appealed to me by its harmony and its perfect association of the individual and the collective.

That is the positive part of what I have done. I have created something at Marseilles, as I realised when, on October 14 last, at 9 o'clock in the morning, I saw it completed and inhabited. There was general agreement that it was magnificent, and I was the first to say so. I always had confidence that it would prove to be so, in spite of all the attacks that were made upon it, and on October 14 of last year I realised that here was a new achievement not of an architect but of the constructive spirit of our time.

Now let me tell you something which will show you that I am, after all, modest. I began in 1923, when I built a village at Pessac. For eight years this village remained unhabited because for eight years it was refused a water supply, until in the end the Government had to intervene. In 1925 I built the pavilion "L'Esprit Nouveau" at the Exhibition of Decorative Arts in Paris. It was the most hidden-away building in the whole exhibition, and came upon you, as you went round the exhibition, as a sudden apparition, as something wholly unexpected. The international jury wanted to give me a diploma of honour, but one of the best architects in France, himself a medallist, protested; he said, "Whatever it may be, it is not architecture." The battle, you see, was already joined.

WORK REJECTED

Then there was the competition for the new League of Nations building in Geneva. Twelve kilometres of plans were submitted, and I sent in about 100 metres. That was not accepted, for reasons which I thought were little short of abominable. That was followed by plans for the Centrosoyus building in Moscow, which were first of all accepted, but then they wanted a balcony on the façade, and in the end my proposals were dropped. I was asked to prepare plans for the Palace of the Soviets, and these were first of all accepted and then declined.

In 1935 I decided to go to America for a change of atmosphere, and there I found—you may not believe it, but it is true—Americans who were suffering at that time from an inferiority complex. A model of my design for the Palace of the Soviets was exhibited—of all places!—at the Rockefeller Foundation in New York, where it aroused the admiration of young Americans. That model, two metres long, is in the museum of the Rockefeller Foundation. Another project on which I worked at that time was refused on the dual plea that it was revolutionary and out of date.

With some Brazilian architect friends I worked on plans for a Ministry building in Rio de Janeiro. That building was actually put up during the war. I found out that it had been through seeing an illustration of it in an English magazine, and I recognised it at once as our palace, put up six or seven years after we designed it.

Then came the reconstruction of France after the occupation. Everybody seemed to be working on this, and the Minister who was responsible said to me, "What are you reconstructing?" I replied, "Nothing, Mr. Minister." He said, "Well, you built a town once. Why not reconstruct that?" He made inquiries from his staff, and they told him that all the work had been allotted to somebody or other, so he said, "Well, there is always La Rochelle. It is not destroyed at present, because the Germans are still there, but the Allied Armies are closing in, and in a fortnight it will be destroyed, and then you can rebuild it." Happily, however, it was not destroyed, and so I did not have to rebuild it.

I ought also to mention the town plan for Algiers. Over a period of years I made a number of plans without any fee for a new town, and people said, "If it could come true it would be marvellous," but it did not come true. Algiers was the last of such plans. I made a plan for Barcelona which was accepted by everybody, but then the revolution came. I made a plan for Stockholm, but they said that they recognised the hand of the author, and it was put on one side. There was a plan for the left bank of Antwerp in 1933. In 1938 I did a plan for Buenos Aires, but seven years later one of the Ministers said, "If we bring in Corbusier, it will seem to show that we can't do it ourselves." A plan for Bogota was accepted, but then there was a political revolution.

All that represents the work of a *cheval de fiacre*. It meant a vast amount of work by head and hand and collaboration with large numbers of people. My plan for La Rochelle, which was a good plan, was silently put aside; I was not called on to do anything, and the town was reconstructed on other lines. At St.-Die, which I was asked to rebuild, people said, "Are you going to make us live in huge barracks?" and everybody, from the bourgeoisie to the workers, rejected the idea. That shows you a little of the nature of the work which I have accomplished during my career.

I should like to say once again how much I appreciate this Medal which I have received from Her Majesty the Queen, and I thank you once more.

UNITÉ D'HABITATION

Le Corbusier's Lawsuit

The following article by M. G. Pilliet, a French housing expert, explains and comments on the recent lawsuit brought by the Society for General Aesthetics of France against Le Corbusier, arising out of the building of his 17-storey Unité d'Habitation (La Cité Radieuse) at Marseilles. The article (which is translated by M. P. Osborn) is reprinted by kind permission of the Editor of "Town and Country Planning."

TO understand the action instituted by the Society for General Aesthetics of France against M. Le Corbusier and others re La Cité Radieuse, one needs to know that no one can build in France if he has not received a building permit actually delivered by the Ministry of Reconstruction and Planning, after agreement by the local authorities; and to know also that building construction is subject to the regulations of the sanitary authorities of the Department (the regional administration) which fix minimum standards of construction.

The Society took action against M. Le Corbusier for building La Cité Radieuse without having first obtained this permission.

It is true that, as soon as the action was begun, the Ministry of Reconstruction realised that it had made a mistake in bypassing a rule which it had set up itself, and immediately made an order dispensing with this formality in the case of this building, on the grounds of its experimental nature. But the Society for General Aesthetics of France pointed out that this decree was not valid because it was signed only by the Ministry of Reconstruction whereas it should have been signed also by the Ministry of Public Health and the Ministry of the Interior.

The Council of State upheld this view and declared that decrees after the event were invalid.

The Society for General Aesthetics pointed out, in addition, that a decision of the Council of Public Hygiene had absolutely forbidden the construction of the building, on the ground that the height of the ceiling was 2½ metres only, whereas the regulations in force in the Department required a greater height.

In fact, the Tribunal decided:

That the Society could not take action because it was not itself an injured party;

That it was not its affair to insist on obedience to the regulation as to permits for building and that only the Government could take such action;

Also that Le Corbusier cannot be condemned for reasons of aesthetics which are at least as vague as they are variable.

If one analyses the reasons adduced for the non-suiting of the Society, one sees that the decision was taken on points of law, not at all on the fundamentals of the case. It remains true that the building has been constructed in defiance of the rule requiring permission to build and in defiance of the departmental sanitary regulations, and in addition that the Tribunal has avoided making a pronouncement on a question of aesthetics.

The matter remains, accordingly, as it was. It is to be regretted that this action has been instituted by a body which had no powers for so doing. And, in fact, as the commentary in the French review *L'Actualité Juridique* very justly says, the Tribunal cannot be expected to give judgment on a matter which only posterity can settle.

It is obvious that posterity will give its judgment on the aesthetic question when it is at a sufficient distance to make it, and on the sanitary conditions when the occupants have had time to appreciate the advantages and disadvantages of the system.

As to the question of finance, it is beyond doubt that the building has been extremely expensive and that with the money that has been spent a much larger number of dwellings could have been built much more quickly. On the other hand, there is a gamble in it, because if it were proved by experience that this type of building does offer considerable advantages, it would not turn out a bad investment to spend a lot of money on a prototype, prototypes being always very expensive.

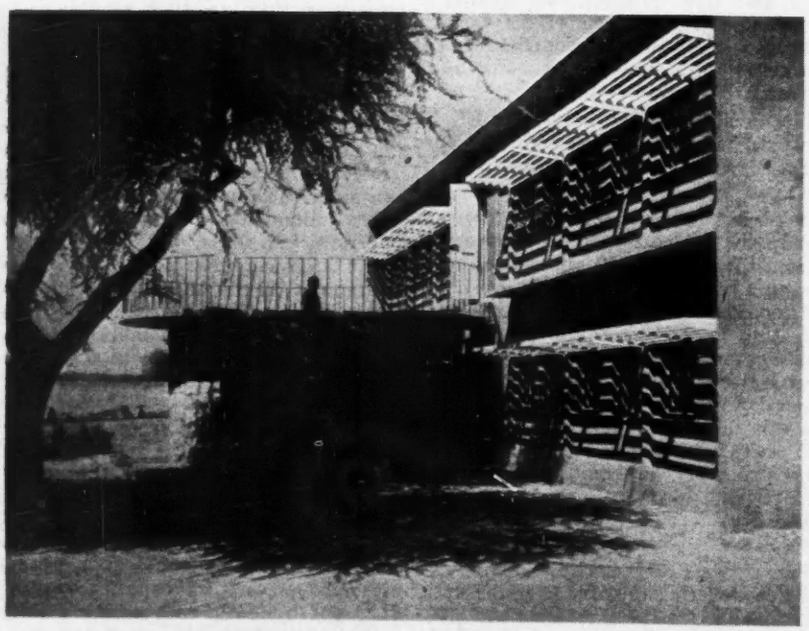
KUMASI COLLEGE OF TECHNOLOGY: General workshop block, showing the Y-beams housing mechanically operated louvres adjustable through 135 deg. Architects: James Cubitt, Scott and Partners, Accra.

Tropical Architecture

CONFERENCE AT UNIVERSITY COLLEGE, LONDON

NEARLY 200 students, practising architects, engineers and others interested, attended the Conference on Tropical Architecture held at University College during the week beginning March 23. Over one-half came from tropical or subtropical lands. The conference was organised by a Committee under the chairmanship of Mr. Alister Macdonald, FRIBA, with Mr. A. Adeokun Adeyemi as hon. secretary, and both the RIBA and the Colonial Office lent their support. A total of 11 sessions was held and at each an address was given on a subject of importance to architects working in the tropics, while the discussions that followed afforded an opportunity for a wide interchange of ideas and information.

Monday, March 23: Morning Session.—The chairman introduced MR. C. Y. CARSTAIRS, CMG, Assistant Under-Secretary of State, Colonial Office, who spoke on "The Social and Economic Background." Mr. Carstairs underlined the magnitude of the problem of achieving a higher standard of living in the underdeveloped territories, a problem considerably complicated by a steep rise in population and the resultant uncontrolled drift to the towns. The consequences were squalid housing, economic uncertainty and social chaos. To right the economic situation, new land must be opened up for food production, and land already cultivated must be used to better account, while for those who could not practise agriculture a new way of living must be found by industrial development. To provide housing at the rate required by the mass shift of population was an enormous task, but one that was vitally important not only to the town dweller but also to the peasant. He thought that we should not be near the solution of tropical building problems, however, until there had been built up an architectural profession from amongst the people of the territories themselves, for only they could have the intimate touch, the almost unconscious understanding of what was really needed.



KHARTOUM TECHNICAL INSTITUTE: Boarding-house for 24 boys. Architect to PWD, Sudan Government: Derek H. Matthews, Dipl.Arch. (London), ARIBA.

PHYSICAL PLANNING

Afternoon Session.—Under the title "Physical Planning Problems in the Tropics," SIR WILLIAM HOLFORD surveyed the general problem by referring to the recommendations unanimously made by the International Conference on Town Planning in the Colonies and Tropical Countries, held in Paris in 1931. Amongst others, these were that a standard Code of Development was essential at the early stages of any plan, i.e., a combination of the building plan with the planning clauses; that satellite development should be the norm and that orientation was of paramount importance. DR. O. KOENIGSBERGER, town planning consultant, said that in dealing with the problem of the growing concentration of population in urban areas we were faced with two tasks —that of first retarding urbanisation and then guiding it into the right channels. The basic ideas of town planning were universal but in tropical areas there were specific problems. Of these the most important were outdoor living and its effect on urban sprawl; shade and ventilation requirements with their effect on the siting of buildings; the difficulties of providing adequate drainage and sewerage schemes; the great variety of traffic problems and finally the endowing of some

feeling of urbanity on the type of loosely knit settlement so often found in underdeveloped areas.

Evening Session.—" A journey through the Tropics." MR. PERCY JOHNSON-MARSHALL, ARIBA, showed over 200 slides in a general survey of architecture and town planning in all parts of the tropics.

Tuesday, March 24 : Morning Session.—" Indoor Climate and Thermal Comfort." PROFESSOR G. P. CROWDEN, London School of Hygiene and Tropical Medicine, analysed the relationship between the occupant of a building and its indoor climate and the reactions of the individual to various kinds of exterior climate. By a series of diagrams he showed the influence of temperature change on the physiological reactions of people engaged in various occupations. Applying these conclusions to building problems he demonstrated the various degrees of absorption of solar heat by materials of different colours and showed methods of deflecting it by using light-coloured materials, the provision of verandahs and the planting of trees. His colleague, DR. T. C. ANGUS, who followed, made the point that comfort depends on three factors, air temperature, air humidity and air movement, and that from a combination of these an effective temperature chart may be prepared. There followed a demonstration of the " Heliodon," by which architects may determine the shadow and sun effect on a model of their proposed building for all latitudes and seasons of the year.

HOUSING STANDARDS

Afternoon Session.—" Housing Standards in the Tropics." MR. G. ANTHONY ATKINSON, ARIBA, Housing Adviser to the Colonial Office. The speaker first enumerated the five main tropical climate types—the hot humid climate, the tropical island climate, the wet and dry season climate, the hot dry or desert climate and the upland climate. He then gave a short account of the main principles of the design of housing suitable for each region. He pointed out that the various standards of health laid down in local by-laws follow United Kingdom practice, and were thus due for revision in view of the widely divergent social conditions found. In particular the recommended number and sizes of rooms should be more flexible. Ceiling heights were important since ventilation and lighting were related to them. There was need for further research into low-velocity air flow since this would have a considerable effect on window design. The session was concluded by the presentation of a paper on the natural lighting of tropical buildings by sunlight reflected from the ground and from opposing façades, the result of experiments carried out at the Building Research Station by Dr. R. G. HOPKINSON and MR. R. PETHERBRIDGE, B.Sc. This paper was circulated in advance to members.

STYLE AND ARCHITECTURE

Evening Session.—" Style and Tropical Architecture." MR. FELLO ATKINSON, ARIBA, said that in many ways contemporary architecture found its most suitable expression in the tropics. In Europe, we were often forced into using mechanical aids to produce the desirable environment —for example, to achieve open or flexible planning and large window openings we must resort to central heating and even air conditioning. In many parts of the tropics, however, such openness and flexibility were essential, independent of any visual or æsthetic desirability. Open planning allowed us to catch the breeze while at the same time to exclude the direct sunlight. The *brise soleil*, although not the only solution for the control of sunlight, was often a valuable device for introducing scale into an elevation. Sometimes the needs of sun exclusion and breeze induction were diametrically opposed, and that posed a problem which required all the architect's ingenuity, and could result in dramatic visual effects. The whole question of landscape and garden design presented a challenge which could be met in such different ways as the formal architectural landscaping of Southern India, with marble terraces and reflecting pools, or Frank Lloyd Wright's dramatic moulding of desert form in Arizona.

Wednesday, March 25.—A visit was made to the Building Research Station and then at choice to Stevenage or Hemel Hempstead where members were able to see the progress made on the New Towns

Thursday, March 26 : Morning Session.—" Materials and Construction." MR. ARTHUR M. FOYLE, ARIBA, enumerated the various climatic, social and physical factors which had influenced indigenous architecture in West Africa. Often the only material available was mud, and research into the effects of the weather on traditional building materials could be of great assistance to the architect on the spot who was often forced to make do with temporary materials. There was much need for that kind of research and for the pooling of the information so collected. Soil cement had great possibilities, in the improvement of village building, and had been used with striking

UNIVERSITY COLLEGE OF THE WEST INDIES, JAMAICA : One of the Halls of Residence.
Architects : Norman and Dawbarn, FRIBA.

results on the Gold Coast. MR. FRANK RUTTER, FRIBA (of Norman and Dawbarn), outlined the method of approach which should be adopted by architects in this country designing for the tropics, through the detailed survey of climatic and site conditions, the materials and the quality of labour available, the considerations of cost, to the final evolution of the design. Typical details of construction in the new University College of the West Indies were then explained. As for the future there was, he said, an urgent need for the setting up of efficient local building groups whose capacity would be increased by the production of building components on a regional scale.

Afternoon Session. — "New Building Techniques in the Tropics." MR. OVE ARUP said that the general under-development of the tropics was the factor which more than any other affected building. Most of the new materials used were imported, and questions of cost and the labour available affected their choice. The cost of steel usually made steel-framed buildings out of the question. Concrete was the most promising material, and while ordinary concrete was in great use, there was a future for light-weight prestressed and post-tensioned concrete construction. Prestressed factory-made units could greatly cut the cost of site supervision. MR. C. H. GOBIE, of the Timber Development Association, dealt in detail with termite infestation of timber and showed several recommended methods of control, which included the forming of specially designed flashings at danger points and the impregnation of timber under pressure before use. The possibilities of timber as a building material were also dealt with.

ARCHITECTURAL EDUCATION

Evening Session : "Architectural Education and Training in the Tropics." MR. MAX LOCK, FRIBA, spoke on this subject. The architectural student from the tropics entering a school in this country received, he said, a training which was not sufficient to enable him to become a good practicing architect when he returned to his native land ; but students would continue to come to England for some time due to the dearth of educational facilities in the under-developed countries. This contradiction might be resolved by arranging for tropical students to follow the normal course up to the third year, while for the fourth and fifth years they pursued a course more suited for tropical practice. Eventually the centres of education would shift from this country and the native student would then receive a basic training at home in order to develop a truly vernacular approach to design. He might then come to Europe or America to draw on the wealth of specialised training which was available there.

Friday, March 27—Morning Session : "The Position of the Architect in the Tropics." PROFESSOR R. S. GARDNER-MEDWIN, FRIBA, speaking on this subject said that until recently the architect had been considered an unnecessary luxury in most tropical countries ; as a result, with some exceptions, he generally occupied a post junior to the engineer in the various Public Works Departments. This arrangement had a definitely adverse effect on recruitment, promotion and professional prestige. The fullest co-operation on terms of equality with engineers was desirable to ensure the smooth progress of the various development plans. The speaker was glad to see that the Colonial Office was becoming increasingly aware of the architect's role ; where it had been recognised, an improvement in the standard of design was already evident. That applied particularly to the work of the Singapore Development Trust.

Closing Session : THE CHAIRMAN opened the session by reviewing the wide field which the conference had covered and referred particularly to the lively discussions which had followed each lecture. This, and the large number of people who had attended, was proof that the conference had come at the right moment. MR. V. J. PATTERSON, student, Jamaica, then proposed, and MR. H. KENDALL, Town Planning Officer, Uganda, seconded a resolution, which after discussion and amendment was unanimously approved in the following terms : "That the members of this conference endorse the action taken by the organising committee. The conference has demonstrated clearly the need for some standing organisation which will be concerned with architecture and planning in the tropics. The conference therefore asks the organising committee to continue its work and foster : (1) Improved educational facilities for students and architects interested in work in the tropics and particularly the establishment of permanent centres for the study of architecture and planning at ordinary and post-graduate level ; (2) the encouragement of local building crafts and their use in contemporary building ; (3) the publication of information on tropical architecture and planning ; (4) the establishment of research and information centres on a regional basis ; and (5) the organisation of further conferences."

The conference was concluded by an address by SIR PATRICK ABERCROMBIE in which he underlined the wide diversity of climatic conditions found in the tropics and the multitude of problems which faced planners and architects.

ARTHUR M. FOYLE.

The three illustrations are from an Exhibition of Architecture in the Tropics held at the Bartlett School of Architecture, University College, in connection with the Conference.

HEALTH CONGRESS

THE DEVELOPMENT PLAN for Middlesex will be the subject of a paper to be given by Mr. P. T. Harrison, MICE, MTPI, at the Royal Sanitary Institute's health congress which is to be held at Hastings from April 28 to May 1. Mr. Donald A. Goldfinch, FRIBA, will also contribute to the proceedings by giving a review of the existing legislation concerning rural sewerage and water supply, etc., and the reconditioning or clearance of old houses will be discussed by Mr. F. Collin Brown, FRIBA, MTPI.

CORRESPONDENCE

MOBILE CRANES FOR HOUSE BUILDING

To the Editor of *The Builder*

SIR,—Letters in your issues of March 20 (Mr. Ford) and March 27 (Mr. James) prompt me to clarify the position regarding the reported results at Norwich, where a rail-mounted tower crane has been used to assist in handling materials for house building.

The saving of 1,000 man-hours per house quoted refers to the whole work, including the foundations, shell finishings and site works. This reflects the combined result of the use of the crane and the effective site organisation (with the programming and phasing of all operations) which its use stimulates. The cost saving of £50, with the reduction in labour expenditure of 600 man-hours per house, refers to the foundations and shells to the roofed stage only.

Full reports of the results of this work at Norwich are now being prepared for publication and will include a description of the organisation and programme used.

F. M. LEA,
Director of Building Research.
Building Research Station.
Garston, Watford.

To the Editor of *The Builder*

SIR,—Two letters have recently appeared in *The Builder* in connection with the experiment just completed at Norwich in building houses with the use of a tower crane.

I would like to correct a misunderstanding implied in both letters. It is that 1,000 man-hours were saved on the erection of the shells only. This is not so, as this saving was made on the construction of a complete house, and was based on a comparison of the man-hours that had been taken by my department in building similar houses.

I do not think Mr. James's friends in the BRS have fallen into the trap he suggests, but, in any event, I have found it almost impossible to obtain accurate information about the "particular," and have accordingly had recourse to the general.

H. C. ROWLEY, City Engineer.
City Hall, Norwich.

PAYMENT OF ACCOUNTS

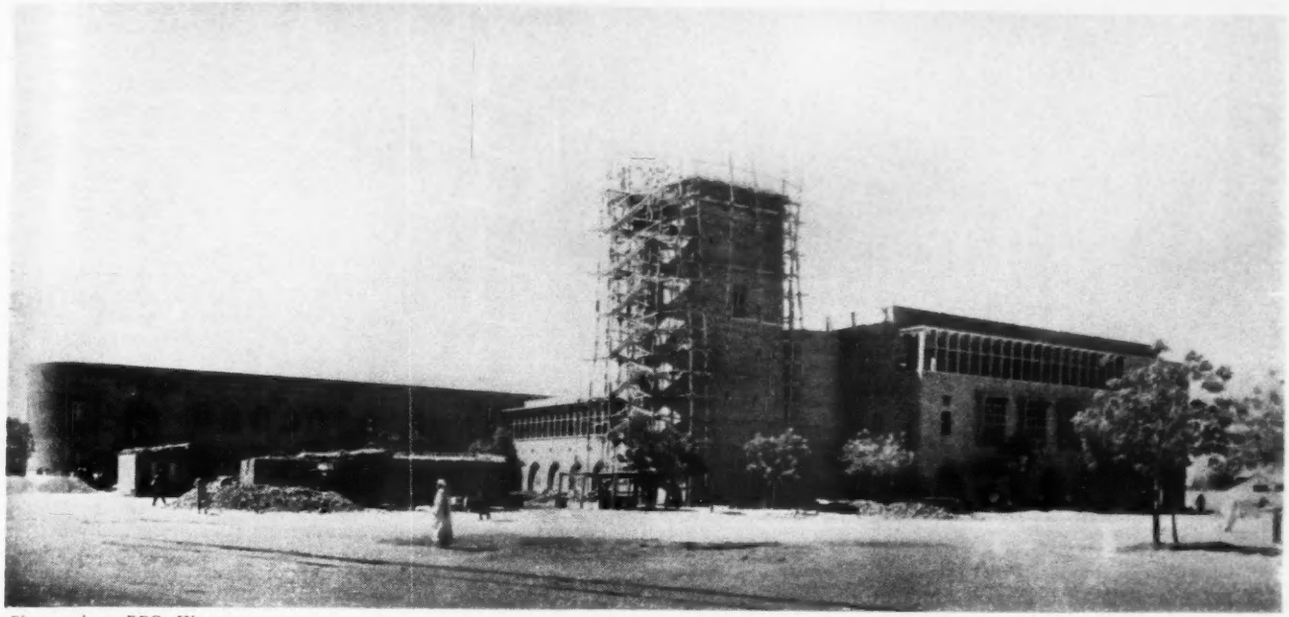
To the Editor of *The Builder*

SIR,—As a matter of general interest to your readers, you might like to know that I was recently able to report to my Council that we had reduced the time between the end of the maintenance period on house building contracts and the payment of the final account for those contracts to a period of four months, and there will be every hope of reducing it still further so that the final account should be paid not more than a month after the maintenance period.

We are building on an average of 250 houses per annum, the quantity surveying work being done by one quantity surveyor and two assistants employed on my staff.

G. E. HILL,
Borough Engineer and Surveyor.
Woodville-terrace, Gravesend.

(*Correspondence continued on page* 569.)



Photographs : PRO, Khartoum.

OMDURMAN CIVIC CENTRE : View of municipal offices from north-east.

Current Architecture in the Sudan

THE CIVIC CENTRE AND A GIRLS' SCHOOL, OMDURMAN

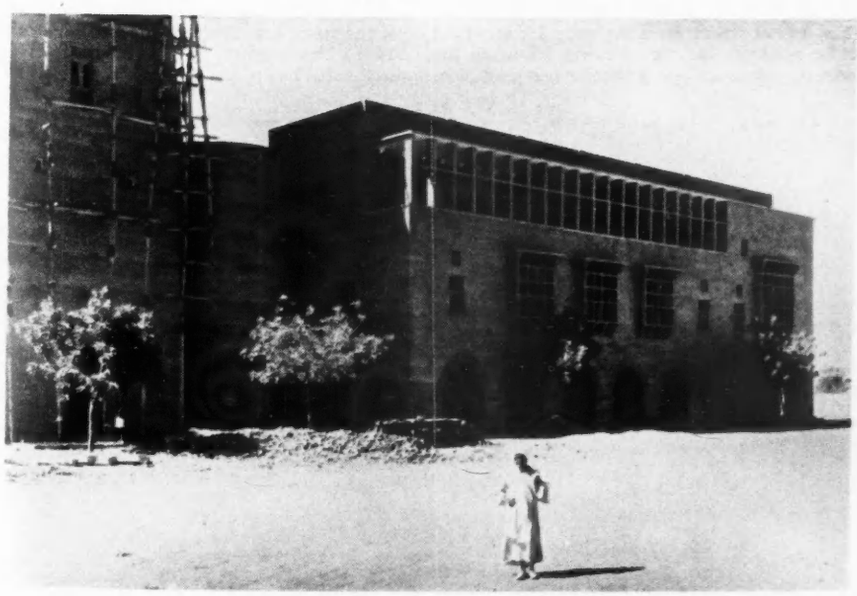
From a Correspondent.

THE two buildings illustrated in these pages are both in Omdurman, and show how modern constructional techniques are being married to local needs and problems. Both structures—the Civic Centre and the Kerreri Girls' Intermediate School—have been designed by Mr. Derek H. Matthews, Dipl. Arch., Lond., ARIBA, Architect to the PWD, Sudan Government.

The Omdurman Civic Centre

The scope of this project is to develop as a fine central site in Omdurman a Civic Centre. Omdurman is the largest Sudanese town, and is regarded by them as the real capital, although Khartoum, on the other side of the White Nile, is the administrative centre of the country. The buildings just completed are designed to form a Town Hall, and they are symbolic of the increasing scope and activities in the sphere of local government in the Sudan. They will be staffed entirely by Sudanese officials. Later it is proposed to build Law Courts adjoining the Municipal Offices.

The site is a prominent one on the main route between Khartoum and the commercial centre of Omdurman ; it adjoins older administrative buildings which are inadequate for the increased demands of development. On the opposite side of this main road lies the Khalifa Square, a large walled area used for festivals, on the far side of which is the Tomb of the Mahdi, and the historic Khalifa's House, the former headquarters of the Mahdists. North of the Square is situated the modern hospital. The prominence of the site makes it one of the most important in the Sudan, and it presented an opportunity for the exercise of the broad considerations of civic design, and the production of this group, which now forms the " centre of gravity " of Omdurman.



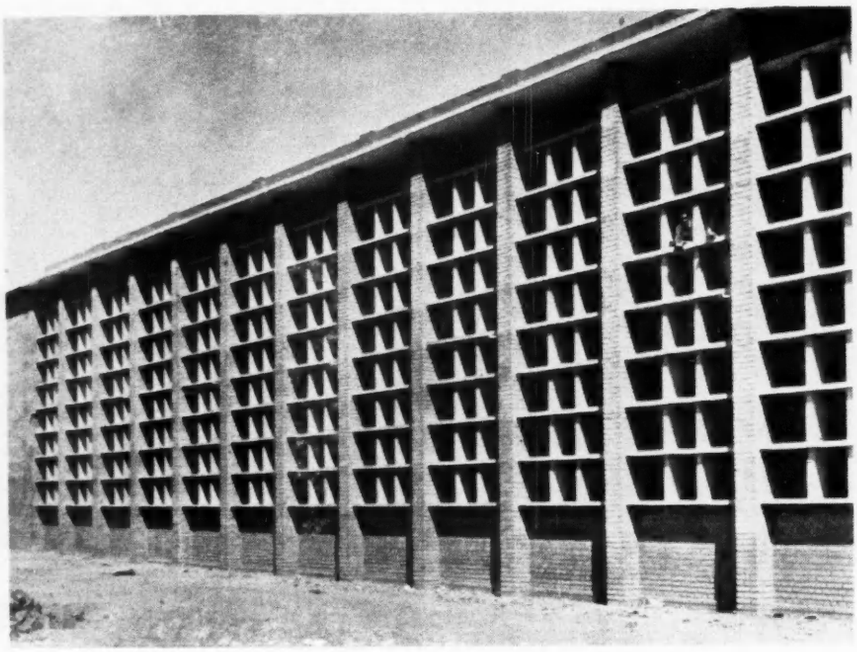
OMDURMAN CIVIC CENTRE : Block housing Town Clerk's department. The council chamber windows at first-floor are protected from the sun by brise-soleil.

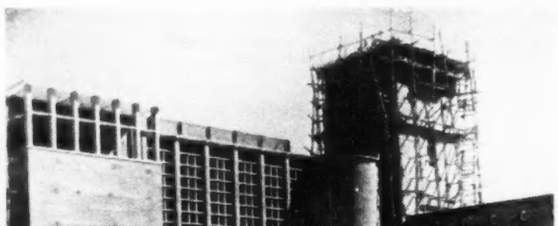
EAST MEETS WEST

The scheme forms a meeting point of the East and the West, and whilst a contemporary building is needed, it was felt to be incorrect to superimpose European forms without regard for regional requirements. Therefore, the character of the climate and environment have been analysed, in the attempt to evolve a satisfactory form in which constructional works should reflect the culture, dignity, and potentiality in the region, being a fusion of contemporary requirements with an understanding of the local conditions.

A Civic Centre, as such, hardly exists in the Sudan at present, and there are no local prototypes to follow. The form of the present buildings derives naturally from the contrasting masses and the use of local brick, without the self-conscious imposition of an alien style. It happens that the indigenous Arab forms are sympathetic to present-day freedom of planning and grouping, and therefore the buildings as executed have an Eastern character.

The main road passes the site diagonally. It was decided to place the group back from the building line, rather than having it hugging the corner, to avoid traffic congestion, and also to give better views as seen across the open space. This area then becomes a





OMDURMAN CIVIC CENTRE : Above is seen the south wall with brise-soleils *which exclude the sun and glare. They also form a strong decorative motif. On the right is the south wall of the 3-storey block. This view was taken in the morning.*

" piazza " or town square. By the use of a " double-elbow " plan, the component blocks create spaces between themselves and the adjoining buildings. In addition, this plan-shape avoids the necessity of having offices facing east or west, where the sun would penetrate (only unimportant store-rooms face east or west). Prevailing winds are from the north-east and south-west, therefore, the chosen orientation takes the maximum advantage from these conditions.

USE OF BRISE-SOLEIL

The north walls receive very little sun, as it only touches them at a high angle in mid-summer. All main rooms have north walls ; circulation is arranged on the south of each block, and the verandahs are protected by a new type of *brise-soleil* which excludes the low winter sun, and at the same time allows a free circulation of air. The *brise-soleil* also prevents glare within the verandahs, a fault in those buildings which only have unprotected verandahs. The principle of this brise-soleil is that when the sun is low, in the morning and evening, the vertical members cast shadows ; in the parts of the day when the sun is nearly south, it is high enough for the horizontal slabs to come into play.

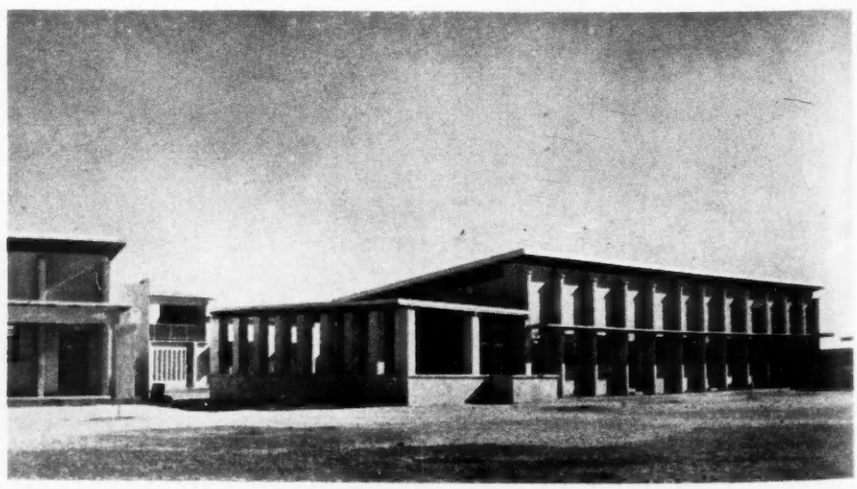
Although the *brise-soleil* slabs are of concrete for durability, it has been found that they do not warm up sufficiently for any heat to be radiated into the building. During the hottest period of the year the sun is north, and therefore never touches them at all. This is the first building in the Sudan in which this type of *brise-soleil* has been used. In itself the " sunbreaker wall " is a strong and effective motif in civic design. It effectively terminates the street vista from the south, and acts as a foil to the memorial to Slatin Pasha, and the older administrative buildings near by.

The group consists of two main blocks, with a connecting link and a tower. The two-storey block contains offices for the Public Health Department, and the Municipal Engineer ; the three-storey block contains the Town Clerk's Department, licensing and rates offices, Council chamber, and committee rooms. The composition is unified by means of the tower which, 23 metres high and surmounted by a dome, contains the main entrance, library and rooms for archives. Further extensions are possible towards the south, without disturbing the existing group. A car park is situated behind. It is the intention to build a group of Law Courts adjoining the Town Hall.

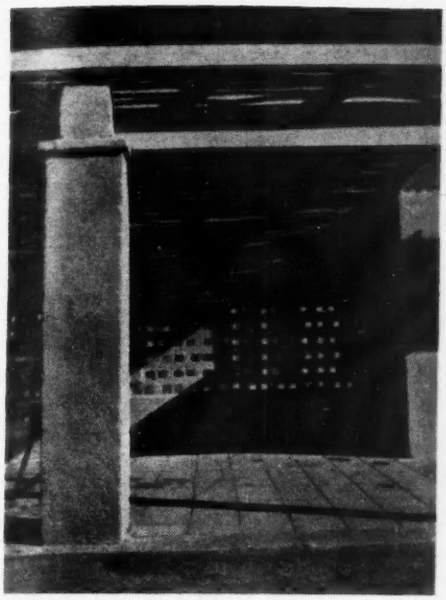
Construction : Brick walls and piers, upper floors, concrete reinforced with expanded metal, supported on R.S.J.s. Main roofs, of corrugated asbestos supported on light steel trusses, with ceilings of fibre-board ; verandah roofs of concrete reinforced with expanded metal. Dome on the tower of shell concrete. Windows, standard metal. Internal doors, flush. External doors, of teak. Floor finishes, offices, precast concrete tiles, entrances, terrazzo. The contractors are Messrs. Calliangi and Zervos, Khartoum.

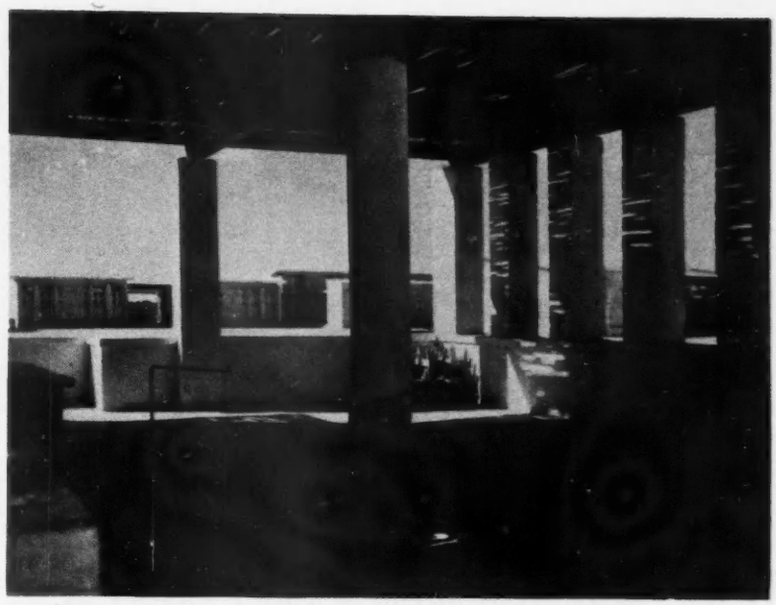
Intermediate Girls' School

The problem in this school (there is another similar at Atbara) was to provide standard designs for building Girls' Intermediate Boarding Schools, with facilities for the teaching of domestic science. Individual schools vary in size and scope of teaching, and this fact made it difficult to evolve a standard design for all types and sizes of school, to suit any possible site. To save drawing-office time it was necessary to design a series of standardised units which could be assembled together in different formations to suit individual sites, and various types and sizes of schools. In this way, for each new school, only a site plan has to be prepared, yet the parts are always related to each other, and to the locality. If required, it is also simple to build the complete school in a



OMDURMAN GIRLS' INTERMEDIATE SCHOOL : The domestic science block.





OMDURMAN GIRLS' SECONDARY SCHOOL : On the left is a waiting space. The roof is of split bamboo for shade, and the pierced screen will be noted. On the right is the laundry teaching space, with pool, and split bamboo roof.

series of stages, as and when funds are available, and future extensions are also possible.

The design is a break-away from the former relatively traditional form, in which long, thin, barrack-like blocks used to be arranged in a formal layout, with large spaces between. Instead of this, the space is split into a larger number of smaller areas, more in scale with the occupants and their needs. This is very necessary, as most sites are in the open desert, with little or no relief from vegetation and topography. The character of the individual buildings comes very directly from local climatic conditions, and the severe limitations of the materials and building craftsmanship available.

DORMITORY UNITS

Each school contains a number of interlocking dormitory units, one unit per class, providing recreation spaces, shower-baths, stores for luggage, and shaded open-air sleeping spaces, as well as four rooms each to contain ten beds. There may be three or four of these units, depending on the size of the school, and the units can be grouped in a variety of ways, to suit the exigencies of the site. Their " interlocking " character allows for the formation of small courtyards enclosed on three sides, and having a domestic scale. The teaching and dining areas are situated across a larger space which can be used for gardens or games, depending on the topography of the site. The classrooms are staggered for reasons of sound insulation, and also to form shaded waiting spaces. Adjoining these are the rooms for teaching laundry work and cookery. The dining hall and kitchen is also placed in this area.

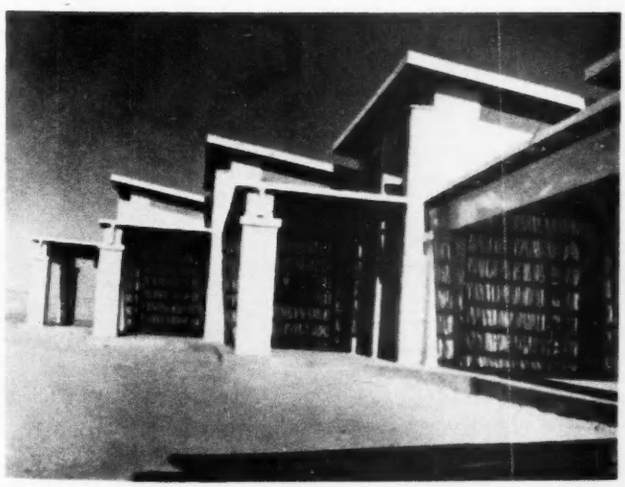
HEPTAGONAL COURTYARD

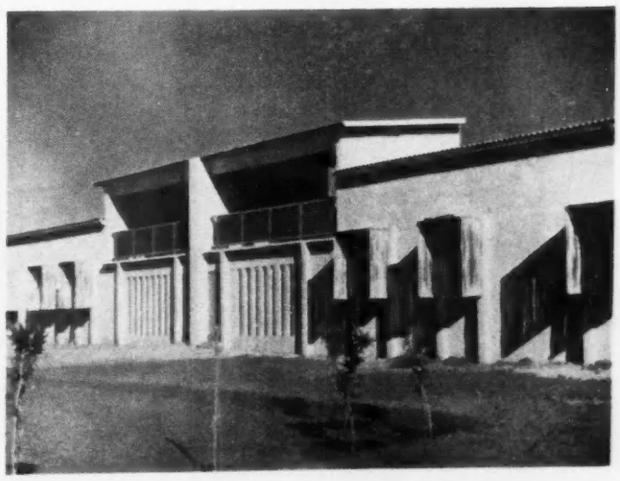
The administrative block contains offices, staff rooms, stores, sick-room, and an open-air stage. These components are arranged to form a heptagonal courtyard, into which the main entrance converges. Moslem customs do not favour the girls being seen by male strangers, and therefore entry to the school is through this courtyard, which prevents the public from seeing into the walled area of the school.

Also included in the building complex is a pair of houses for the headmistress and her assistant. These quarters are planned on the courtyard principle, with an upper floor for open-air sleeping. They are not provided with large gardens because irrigation water is not always available in the desert sites proposed for these schools.

MATERIALS

Construction : Materials are hollow concrete block walling, and some masonry when available ; corrugated asbestos roofing supported on timber trusses or trussed purlins, and fibre-board ceilings ; shaded areas are covered with split bamboo ; windows are either of timber or are standard metal casements.





Left is the classroom block, with entrances and waiting spaces shaded with split bamboo. Right : Houses for headmistress and assistant. The bamboo box-frames shade the windows from the winter sun.

Residential Club for Old Ladies,

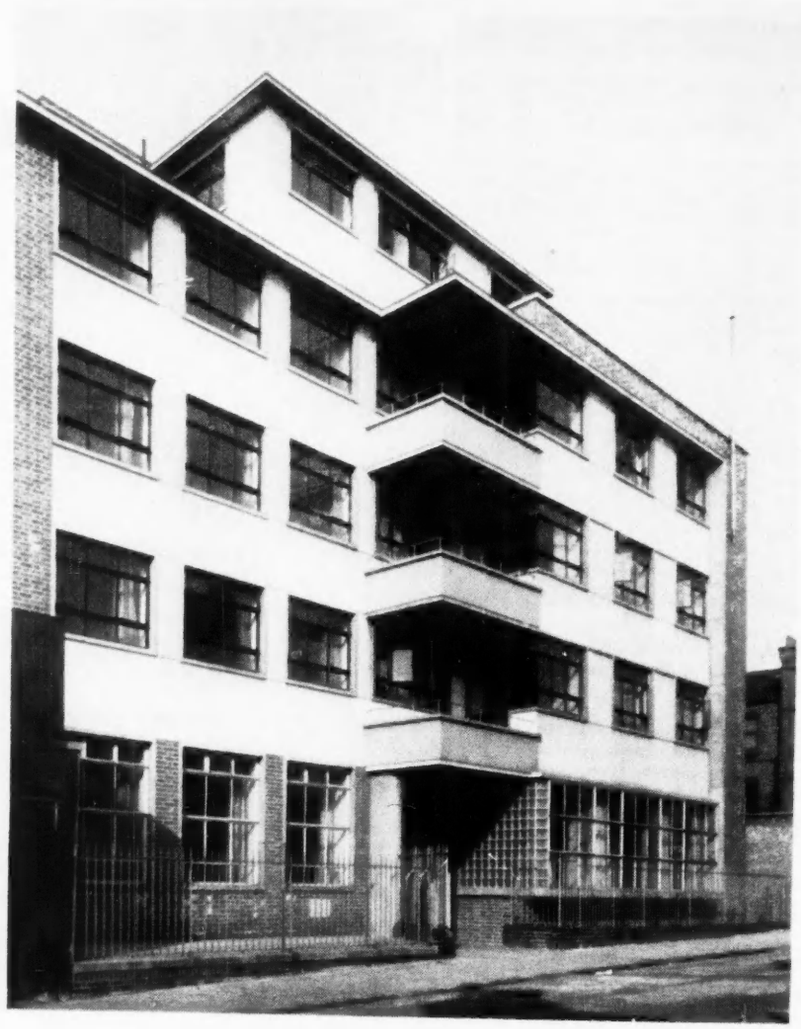
Wedlake Street, North Kensington

Architects :
HASTIE, WINCH & KELLY, F/LRIBA

Quantity Surveyor :
R. T. DADSON

Clerk of Works :
W. L. DUFF

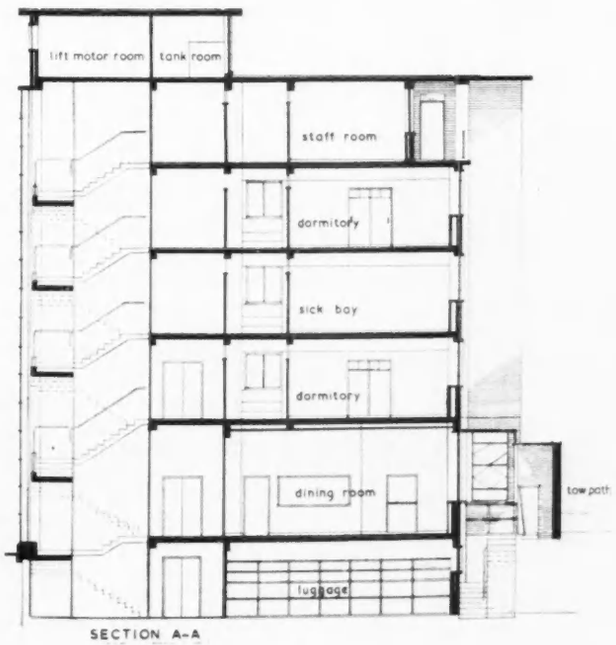
Builders :
J. GERRARD & SONS, LTD.



Main entrance front to Wedlake-street.

Detail of main entrance.

View from Kensal-road.

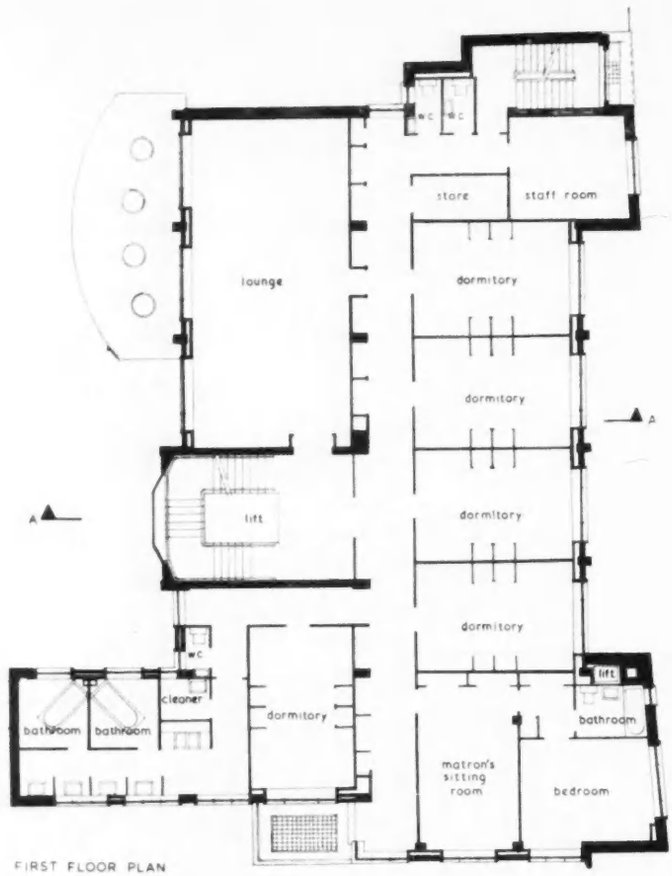


SECTION A-A

THE object of the owners of this building, Cecil Houses (Inc.), is to provide a home and full board for 72 elderly women from the age of 60, that is when retirement pensions commence.

Small dormitories, or bedrooms, with four beds in each have been provided, and each woman has her own bedlight, fitted wardrobe and bedside cabinet. There is accommodation for a resident staff of 14, including the matron who has a self-contained flat, an assistant matron and cook. Each has her own bedsitting-room and share a bathroom, and the nurse has her own bedsitting-room and bathroom.

A self-contained sick bay accommodates seven women, and is on the second floor. It has a dispensary and ward kitchen. A laundry is situated on the fourth floor with a drying room adjacent. These rooms are tanked to prevent the percolation of water to the floor below.



FIRST FLOOR PLAN

GROUND FLOOR PLAN

The basement was completely tanked as it is below the level of the adjacent canal.

Angles of light affecting surrounding buildings determined the shape of plan. As the town planning regulation allowed only 50 per cent. of the site to be covered and this had a restricted shape, balconies and flat sun roofs have been provided wherever possible to allow as many occupants as practicable to enjoy sun and air. There is, too, a small laid-out garden which faces south.

Construction : Reinforced concrete frame, external walls and floors. The external walls are generally of 6 in. reinforced concrete with "Thermacoust" used on inside face as shuttering and left to act as thermal insulation. Pipes are concealed in ducts.

Cream Vitrolite was decided upon for the exterior finish because it affords easy cleaning.

Walls and ceilings of main rooms, corridors and staircases are painted with an eggshell colour finish. Contrasting pastel shades are used between walls and ceilings, i.e., blush rose walls with light green ceiling ; light green walls with blush rose ceiling, etc. Public rooms have either strip oak or woodblock floors ; elsewhere linoleum has been stuck to cement screed. In lavatories, toilets and bathrooms black Semastic tiles have been used.

Ample built-in cupboards for the storage of bedding and linen have been provided on one side of corridors.

The following items have been designed for the comfort and well-being of the occupants : the sun roof, facing south, is built with a wall to conserve warmth and protect from breezes. Each bed in the sick bay has a light so devised that it cannot shine directly on to the patient, while each has a small green light for the use of the night nurse. Near the sick bay is a dispensary where the visiting doctor may treat ordinary ailments. Adjacent to the sick bay is a w.c. with a specially wide door to admit a wheel chair.

In all washing rooms the water flows into the basins by slight pressure on a ball knob, thus saving weak wrists from having to turn taps on and off. Two comfortable foot baths with teak seats are built in alcoves, with a handy shelf for towel and soap. All w.c.s., are fitted with a hand rail. The door can be opened from outside by the simple insertion of a pen knife or screwdriver in the lock, in case of emergency. All corridors have a handrail.

The slow-moving lift has an accident-proof door. Self-closing, it immediately reopens if it touches

Entrance vestibule.

anyone entering. The number of each floor is painted on the wall outside the lift, and the rooms are recognisable by their distinctive colour scheme extended to the non-skid mats.

Every guest has a miniature dressing table fitted with a small mirror. There is also a mirror in each individual wardrobe and a light over every bed. Main lights are turned off at night, leaving small ones on each corridor. In case of a breakdown the lighting system becomes battery-driven.

The dining-room, with its blush walls and pale green ceiling, has parquet flooring with matching wooden chairs (red-seated) and tables with pale green, heat-resisting tops. There is a large labour-saving kitchen and a small service lift to the sick bay.

The women's baths are set in the middle of the bathrooms in order to facilitate assistance being given on both sides of the bath to incapacitated or infirm inmates.

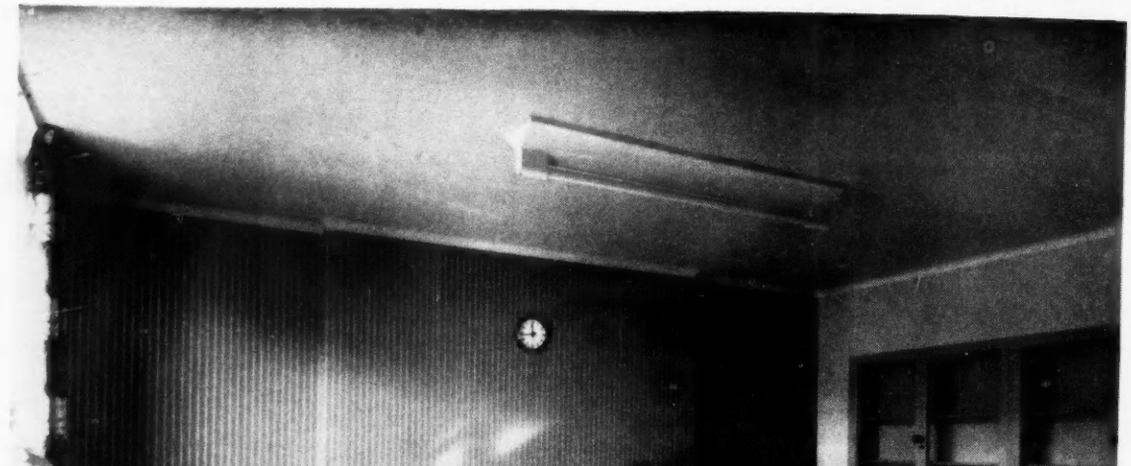
The whole building is centrally heated on an oil-burning system, designed for conversion to solid fuel should necessity arise.

The contract price was £85,900. Following is a list of the sub-contractors :—

Asphalt and dampcourses, Lawford Asphalte Co., Ltd. ; reinforced concrete and artificial stone, London Ferro-Concrete Co., Ltd. ; bricks, Richard Parton (Builders Merchants), Ltd. ; Vitrolite and glass bricks, James Clark and Eaton ; external tiling to balconies, Carter and Co. (London), Ltd. ; patent glazing (rooflights), Luxfer, Ltd. ; paropa roofing, Frazzi, Ltd. ; tanking to laundry floor, The Ruberoid Co., Ltd. ; Semastic tiles in toilets, etc., Semtex, Ltd.

Central heating, Norris Warming Co., Ltd. ; cooking apparatus, Aga Heat, Ltd. ; gas fitting and equipment, North Thames Gas Board ; hot cupboard and urn, G. F. Bartlett and Son, Ltd. ; electrical installation (wiring, bells, telephones, fittings), William Steward and Co., Ltd. ; sick bay fittings, F. H. Pride, Ltd. ; dormitory bedlights, G.E.C., Ltd. ; fluorescent fittings, Troughton and Young ; kitchen equipment (potato peeler), Hobart Manufacturing Co., Ltd., (refrigerator), Frigidaire ; ventilation, Norris Warming Co., Ltd. ; plumbing, G. N. Haden and Sons, Ltd. ; sanitary fittings, John Bolding and Sons, Ltd. ; door furniture, Yannedis and Co., Ltd. ; rolling shutter, Shutter Contractors, Ltd., Enfield ; metal door frames, Henry Hope and Sons, Ltd. ; drying-room screens, F. A. Norris and Co., Morden.

Metalwork, Hurst Franklin, Ltd. ; joinery, The Manor Joinery Works, Ltd., Barking, Essex ; internal wall tiling, Carter and Kernahan, Ltd. ; terrazzo, Art Pavements and Decorations, Ltd. ; paint, I.C.I., Ltd. ; wallpaper, Arthur Sanderson and Sons, Ltd. ; lifts, The Express Lift Co., Ltd., Northampton ; electric clocks, Gent and Co., Ltd. ; water supply, Metropolitan Water Board ; doormats, Lord Roberts Workshops ; linoleum, The Cellulin Flooring Co., Ltd. ; mirrors, Waring and Gillow, Ltd. ; fire extinguishers, Foamite, Ltd. ; fascia lettering, etc., Yannedis and Co., Ltd., and Haswell and Peattie, Ltd. ; flagstaff, J. W. Gray and Son, Ltd. ; and garden layout, J. Burley and Sons, Limited.



Lounge on first floor. Below : dining-room.

RESIDENTIAL CLUB FOR OLD LADIES, WEDLAKE STREET, NORTH KENSINGTON

CORRESPONDENCE

(*Continued from page 560.*)

THE COST OF BUILDING

To the Editor of *The Builder*

SIR,—Yes, it is as simple as that. What we allege, and repeat as opportunity offers, is that if the building industry brings itself technologically up to date and improves its organisation and management then production can be improved. Time and again we have said this, and if your correspondents require confirmation of our point of view, I refer them to the official reports—to the report of the Bossom Mission, of the Simon Committee on the Placing and Management of Building Contracts, of the Simon Committee on the Distribution of Building Materials and Components, of the Anglo-American Building Team, and of the Working Party.

Now the Board of Trade is proposing to refer the activities of the London Builders' Conference to the Monopolies Commission. No building trade union—I have stated and restated this *ad nauseam*—has any rule referring even in the remotest manner to restriction on output.

With adequate supply of materials and regular delivery, building workers do what is required of them: a balanced programme also helps. The Economic Survey just issued shows the building workers in a favourable light, and demonstrates very well that building workers give satisfactory output where the conditions allow them to do so. The operatives are not responsible for technical and organisational defects: remedy these and both production and wages can be raised, while costs remain the same or can even be lowered.

R. COPPOCK,
General Secretary, NFBTO.
Federal House, Clapham, SW4.

IS THE BRICK OUTMODED?

To the Editor of *The Builder*

SIR,—Brick is an old-fashioned building unit and one may ask whether our present-day approach to it is the correct one. Are we not thinking backwards instead of forward? If we obtain all the bricks we need—and that is a very big "if"—what have we done to speed up building, to reduce costs and to improve insulation in the interest of fuel economy? Nothing at all! We shall be back where we were in grandfather's time with the disadvantage of fewer bricks being laid each day. Furthermore many of the small brickworks will never be able to function again economically under post-war conditions. What is being done to replace this lost output?

Why not a larger building unit without a proportionate increase in weight? For example, the lightweight expanded concrete as used in Sweden—where in 1950 38 per cent. of the new dwellings were built of this material in block and slab form against 32 per cent. of brick, 24 per cent. of wood, 2 per cent. of ordinary concrete and 4 per cent. of other materials? Lightweight expanded concrete in blocks for walling purposes means lower labour costs, less weight, better insulation and brighter dwellings, because of the greater scope for the use of colour.

Brick may still be the cheapest form of walling in this country at the moment, but that is due to our slowness in accepting the new materials which science provides. By sticking conservatively, as we do, to the old-fashioned brick as a unit for walling, we are doing nothing to meet the urgent need for lower building costs and we are adding burdens to an already overtaxed source of supply in addition to placing ourselves still further in the hands of the National Coal Board and its ever-increasing prices for solid fuel.

Why not follow the example of the Swedes who have one of the best post war housing records? They would be willing for their method of expanded concrete to be produced in this country under licence. Is it not time that builders took a hand in producing the right type of material instead of always waiting for someone else to supply it? What a joy it would be to arrange for the delivery of our own material when and where we wanted it. If the enterprise is there, money should present no difficulties on a co-operative basis. This is a job builders could undertake in their own and in the national interest.

KEITH MARTIN
(Past-President, Southern Counties Federation of Building Trades Employers).

119, South-street, Eastbourne.

OBITUARY

Guthlac Wilson, DSc(Eng), MICE, MIStructE

IT IS WITH REGRET that we announce the tragic death in a flying accident on March 29, of Dr. Guthlac Wilson, DSc (Eng, London), SM (Harvard), MICE, MASCE, MIStructE, senior partner in the firm of Messrs. Scott and Wilson, consulting civil engineers, of Victoria-street, Westminster. Dr. Wilson and his wife were among passengers in a Central African Airways Viking aircraft which is believed to have broken up in mid-air on a flight from Nairobi to Blantyre. Wreckage of the aircraft was found between Pangani and Dares-Salaam, on the Tanganyika coast. All 13 people on board the Viking were killed.

Dr. Wilson was on his way from Hong Kong, where his firm is engaged on the preparation of a report for the Government of Hong Kong on proposed development at Kai Tak airport, to Blantyre, in Nyasaland, where the firm is also concerned with civil engineering projects.

Dr. Wilson began his career with Sir Robert McAlpine and Sons, Ltd., in 1921. Two years later he went to India as a member of the staff of Messrs. Braithwaite and Co. (Engineers), Ltd., with whom he remained until 1938 when he went to Harvard University and gained a Master of Science degree.

At the beginning of the war he held the post of Divisional Superintendent of Designs with Sir Alexander Gibb and Partners, and later became Director of Construction Design, Ministry of Works. In 1945, he went into partnership with Mr. W. L. Scott.

Dr. Wilson was an internationally acknowledged authority on soil mechanics and foundation engineering, and published a large number of papers on these subjects.

Among the many notable post-war buildings with which Dr. Wilson was closely connected were the British Nylon Spinners factory, Pontypool, (architect, Sir Percy Thomas), Churchill Gardens housing scheme, Westminster, (architects, Powell and Moya), Dutch Church, Austin Friars, EC2, (architect, Arthur Bailey), offices at Coventry (architect, Donald E. E. Gibson, City Architect), Owen-Owen store, Coventry (architect, Rolf Hellberg), prestressed concrete hangar at London Airport for BEA (consulting architect, Keith Murray), Union Castle Terminal Shed, Southampton, which is not yet built, (in association with J. H. Jellett, OBE, MICE), Technical College, Hull, also uncompleted, (architect, Frederick Gibberd).

Work abroad had taken him to Cyprus in connection with a civil engineering scheme for the War Office, as well as to Hong Kong and Nyasaland.

Robert S. Godfrey, CBE

WE REGRET to announce the death on March 30 of Mr. Robert Samuel Godfrey, CBE, surveyor and clerk of works at Lincoln Cathedral for 50 years. He was 76. Mr. Godfrey was appointed to the post he held for so long at the early age of 27 and devoted himself wholeheartedly to the study of the great building he had in his charge. He knew its history and the peculiarities of its structure intimately, and published several papers on its various historical and architectural aspects. The skill and experience he thus acquired were principally responsible for preserving the cathedral in its time of acute danger, from 1921 to 1937, and the methods he then initiated—drilling and grouting under air pressure—have since been adopted by those responsible for the care of famous ancient buildings elsewhere. The Archbishop of Canterbury took the rare step of giving him a Lambeth Degree of Master of Arts for architectural and engineering services less than a year ago.

Mr. Godfrey also advised on the repairs of many other ancient and medieval buildings at home and abroad.

Archibald Bayley, LRIBA

WE ANNOUNCE with regret the death which occurred on March 28 of Mr. Archibald Bayley, LRIBA, of Walsall. He was 47. Mr. Bayley lived in Walsall all his life. After leaving the School of Art he was articled to Messrs. Jeffries and Shipley, and remained with them for 15 years. In 1942 he started his own practice in Lichfield-street. He was at one time connected with the Walsall Building Guild.

HOUSING PROGRESS REPORT

Figures for February

THE HOUSING SUMMARY presented to Parliament on April 1, as a White Paper*, jointly by the Minister of Housing and Local Government and the Secretary of State for Scotland, shows that the number of permanent houses completed in Great Britain during February was 20,118 compared with 16,163 in February, 1952.

In the first two months of 1953, 40,702 permanent houses were completed compared with 31,855 in the same period of 1952.

Shortage of Facing Bricks

The continuing shortage of facing bricks is regarded by Wolverhampton housing committee as "most serious" and the matter is being taken up directly with the Ministry of Housing and Local Government.

* Cmd. 8802 Housing Summary, February 28, 1953. HM Stationery Office, price 2d.

ECONOMIC SURVEY FOR 1953

Prospects for Building Industry Brighter

IN the course of 1952 a critical drain on our reserves was stopped, confidence in sterling was restored, and we regained the economic initiative. This means that 1953 presents both new problems and new possibilities. . . . We must continue to concentrate on increasing exports and saving imports. The driving force behind our export expansion can come only from industry, but it is the Government's duty to create and maintain economic conditions favourable to such an expansion."

These are the conclusions of the "Economic Survey for 1953," published as a White Paper on March 31 by the Stationery Office (price 1s. 6d.), from which we take the following further extracts:

Building in 1952

The Government's aim is to build 300,000 houses a year in Great Britain. As a step towards this end nearly 240,000 houses were completed in 1952, 45,000 more than in 1951. A much improved flow of building materials to sites was secured, and this, together with the knowledge that the programme was expanding, led to greater output and quicker completion of houses. The average period of completion of houses fell from nearly 12 months to 10¼ months. Two hundred and eighty thousand houses were under construction at the end of the year. Between May, 1951, and May, 1952, the labour force engaged on housing increased by 30,000 men, roughly the same number as left work on housing repairs.

Building repair work has declined steadily since 1948, and in 1952 the rate of decline increased. The labour force on building repair and maintenance work is estimated to have fallen by 26,000 men between May, 1951, and May, 1952, and this trend continued during the rest of the year. Most of this fall has taken place on housing repair work, where the amount of war damage work has been running down rapidly. Some of the labour lost to repair work has transferred to new building, and this has helped in raising building output on new work, which increased by about 8 per cent. in 1952. The average numbers employed in the building industry as a whole during 1952 were about 10,000 fewer than in the previous year.

During 1952 productivity in the building industry generally improved. It had declined at the end of 1951 because of the shortage of building steel, bad weather and the excessive amount of work in hand. To help relieve the load on industry the Government decided in December that, with some exceptions, no further work should be authorised to start during the three months to the end of February, 1952; and the building programme for 1952 was reduced so as to bring it more into balance with available resources. In 1952 the weather was better, and supplies of steel and other materials increased, with the result that output rose by about 5 per cent. above the low level to which it had fallen in 1951. The main increases in building were on housing and defence work; industrial building was in general held back by the shortage of steel. (Paras. 82-84.)

Policies and Prospects for 1953

There is every reason (states the Report) to expect that the supplies of basic materials will be sufficient to support a higher level of production in 1953; in particular, the steel shortage is no longer holding back engineering output, except in one or two industries where there are still difficulties over plate or special types of steel. . . . There is little doubt that the necessary labour, materials and industrial capacity will be available for further expansion in 1953. What, then, are the prospects for demand?

Defence expenditure will continue during 1953 to be a major constituent of total home demand. Defence expenditure as a whole is at present taking about one-eighth of the gross national product at factor cost. . . . The Government has decided that, for the time being, no substantial increase above this rate of production would be consistent with proper provision for the expansion of exports of plant and machinery, and for the re-equipment and development of home industry, and the defence programme has been adjusted accordingly. Expenditure on works services for defence has risen sharply during the past two years, but no further increase is expected in 1953-54. (Paras. 121-123.)

Fixed Investment

Supplies of building materials were much improved in 1952, and some further improvement is expected in 1953. More building steel should also be available. Assuming a continuance of the transfer of labour from repair work to new building which has been going on in recent years, the larger supplies of materials will make possible a considerable increase in output of new building work in 1953. The first need will be to restore the level of building by private manufacturing industry, which had to be reduced in 1952 because of the shortage of steel. Building work for defence, including civil defence, is expected to reach its peak during 1953, and it is the Government's intention to complete a good many more houses as a further step towards the objective of 300,000 houses a year. The work done on school buildings in 1953 is likely to be about the same as in 1952, but more new projects can be started. Owing to the large fall in repair and maintenance work and the decline of some other types of building work in the London area, it will be possible to undertake a certain amount of office building work in Central London, where there is a lot of blitz damage to be made good.

Prospects for other types of fixed investment will turn to a large extent on the demands of manufacturing industry for plant and machinery. There can be no question of the importance of maintaining a high level of productive investment in 1953 and future years, since the competitiveness and efficiency of our industries and the volume of our exports must in the long run depend on the quantity and quality of the capital equipment which this country possesses. Indeed, if exports are to be raised to the new plane required and maintained there throughout the years ahead, there will be need for the continuous development of new products and of new industries exploiting new techniques.

In general, there should be resources available in the metal-using industries in 1953 to provide for increased production of capital goods both for home use and for export. This would permit a rise in investment in manufacturing industry, as well as in the basic industries which are expected to increase their demands for plant and machinery this year. There are, however, some types of equipment of which output is still limited by specific shortages of materials or capacity, and in these cases it will probably not be possible to meet in full the combined demands of defence, exports and home investment. (Paras. 126-8.)

SOCIETIES

COVENTRY SOCIETY OF ARCHITECTS

Annual Dinner

COVENTRY, a city which had become famous through its utilitarian products, would soon gain an equal fame from its works of sculpture, its well-proportioned buildings, and eventually its "truly lovely Cathedral," said MR. F. B. REYNER (vice-chairman, Coventry Society of Architects), proposing the toast of "The City of Coventry" at the Society's annual dinner, which was held recently at the Regent Hotel, Leamington.

"This city (Coventry) must have been one of the most random growths that any generation could inherit," he said. He thought the Development Plan would provide an acceptable solution. "I would say that no architect could quarrel with the broad issues of such a beautifully conceived scheme, and congratulations are due to our city councillors, our city architect, and the legal administrators in the Council House."

Mr. Reyner said that "loans, licences and limits" had caused a falling-off of business which, in its turn, had caused "some mild unemployment in the architectural profession." The limits, he said, were the limits of planning permission, "one of the greatest hazards to our living these days."

ALDERMAN H. B. W. CRESSWELL (Deputy Mayor of Coventry), responding to the toast, emphasised the importance of expert direction behind planning and building. The Development Plan for the next 20 years, once assured, he said, would help all architects in advising their clients, and the duty of the Council in exercising development control would be much eased and more fruitful if all schemes were prepared by architects and not by amateurs. The public were becoming increasingly aware of the expense they incurred by not following proper advice.

CITY AND BOROUGH ARCHITECTS' SOCIETY

Election of Office Holders

AT THE annual general meeting of the City and Borough Architects' Society held at the RIBA on March 20, the following officers were re-elected for the session 1953-54:—

President: Leonard C. Howitt, FRIBA, MTPI, City Architect, Manchester; vice-president: C. C. Shaw, BArch, FRIBA, Borough Architect, Barking; hon. secretary: Johnson Blackett, FRIBA, Borough Architect, Newport, Mon.; assistant hon. secretary: Maurice H. Forward, FRIBA, FRICS, Borough Architect, Lewisham; and hon. treasurer: George Kenyon, ARIBA, AMTPI, City Architect, Newcastle upon Tyne.

BOOK RECEIVED

ARCHITECTURAL LETTERING. By A. E. Burke in collaboration with Truman C. Buss. (London: The Technical Press, Ltd.) Price 48s.

MODULAR CO-ORDINATION

A Discussion at the Royal Society of Arts

A DISCUSSION on "Modular Co-ordination" took place at the Royal Society of Arts on March 4. It was arranged by the Modular Society and was presided over by the chairman, Mr. Alfred C. Bossom, FRIBA, MP. Principal speakers were Messrs. D. Fraser (managing director, Troy and Co., Ltd.), S. Johnson-Marshall, BArch, ARIBA (Chief Architect, Ministry of Education), F. J. Samuely, BSc, AMICE, MIStructE, and W. A. Balmain, BSc, ARIC, joint managing director, Uniseco, Ltd. We take the following extracts from their remarks:—

MR. FRASER said his principal interest was to find a method which would avoid cutting and waste on sites, and that he thought that would be one of the benefits that should accrue from the work of the society.

One of the major difficulties in introducing new methods into the building industry was objection and resistance met from the tradition-bound craftsmen through whose efforts the industry had developed. They were reluctant to accept new principles since their skill was their main asset and they feared unemployment through the introduction of new methods. But the needs of the national building programme should ensure continuity of employment, and increased productivity on the sites was essential. Only simplification of building techniques could achieve this, reduce costs and thus encourage greater demand for more building.

His company had been engaged on the erection of council flats, schools and offices. A great practical difficulty was securing guaranteed delivery of components to the site to match the demands of phased building programmes. Another factor causing delay was lack of adequate information in the early stages of a contract. The first trouble was taking off schedules of components for placing orders with suppliers. For example, one plan for 100 flats required 18 different door-frame sections, whilst another only stipulated eight. In the first case probably a few dozen of one section and hundreds of another were required. A supplier would produce the bulk quantity first, and when the smaller quantities arrived later, though they were required at the same time in the building programme, they were difficult to recognise and store, the upshot being they cost a great deal more than they were worth.

Nowadays builders could no longer afford to sink capital in carrying stores and stocks, or making up special items. It was all needed to finance building itself. Standardisation of components should facilitate properly phased deliveries and eliminate storage and handling problems with all their inevitable costs. It would be of inestimable advantage if architects could supply schedules of components when contracts were signed, and also give sheets of typical details.

Despite criticism of the prewar builder it should be remembered he had sold houses cheaply at a profit. He had achieved cheapness by standardisation of components; the unfortunate monotony created by repetition could be avoided if architects gave a lead in design.

MR. JOHNSON-MARSHALL said the tendency over the past 30 years had been to impose standardisation in fact, owing to increasing quantity-production by machine of components off site. Unless skilfully used, mass production would be an anathema, so the core of the problem was to secure the greatest advantages available through standardisation, whilst avoiding as many disadvantages as possible. Modular co-ordination was perhaps the most promising available medium through which this end could be achieved; but it was only one of the major factors in obtaining cheaper building, and must be studied in closest conjunction with the others.

He and his colleagues had no vested intellectual interest in any particular module, nor in the exact use of modules, but were trying to approach the problem empirically and in stages. They had devised a system based on an 8 ft. 3 in. module, and were now engaged on a series of four systems —three at a 3 ft. 4 in. module and one at a 4 ft. module. It was too early to dogmatise about such problems as what happened at junctions between modular units.

There were two stages in the approach to the problem; first, to encourage people to work to a common module—for the moment the best one seemed to be 3 ft. 4 in.; and then, after practical experience of the problems encountered in various materials and techniques, to make a critical review and make revised versions of the components, preferably interchangeable and interconnecting. The 3 ft. 4 in. module was favoured in the reports issued by both the Royal Institute of British Architects and the British Standards Institution.

Practice The Next Stage

He and his colleagues felt the next phase should be practical rather than theoretical investigation. At least 200 post-war buildings had been constructed on a true module, i.e. a module used for all the main components, and which runs along and across the building. They would like a representative selection of those buildings examined to discover what had been contributed by them in terms of time, cost and quality, manufacturers to be asked not only what actual savings were made but what the potential savings were. Also the architects' opinions and users' views.

The problems of modules were approached from different backgrounds—the speakers represented four; all felt keenly the need for modular co-ordination, some would have very differing solutions in mind. The prerequisite to successful modular co-ordination was a common attitude of mind; the quickest way to establish that and resolve differences was for a small team, representing all view-points, to engage in a realistic study of actual buildings.

MR. SAMUELY said he felt there was confusion between module standardisation and the use of planning grids, which were really unconnected. A module on which various sizes of units for building were based was necessary even if there was no standardisation. It would be so useful if brickwork, windows, doors and other components did fit together.

Standardisation was certainly important, but it was a matter of degree, and depended upon the medium in which it occurred; there was a significant difference whether it was metal, timber, or concrete articles that were to be standardised. The more refined a material worked, the more standardisation was necessary; for example, steel required many standards to reach the best production methods for many useful units, whilst with concrete a smaller number of standard units would give maximum economy. It was necessary to decide on its merits how many units were required to be standardised in any given material.

Standardisation had both advantages and disadvantages—it might result in problems of unwanted space and over-large units. The module must serve the standardisation to ensure that components fitted, as he had said. He therefore favoured a small module, which could not be further sub-divided.

He disliked a large module because people would sub-divide it in different ways. An ¼th of an inch was probably a minimum module, but impractical; the practical range was three or four inches; it should be possible to determine a module on which to build in that range. It should be remembered also that the one thing already standardised was the brick, and that must be taken into account. If four inches were determined, for example, then bricks must be four inches, or a window plus joints a multiple of four inches, doors a multiple similarly, concrete columns would be four, eight, twelve or 16 inches, etc. In that way everything would fit well together and there would be a minimum of waste at the site.

MR. BALMAIN said the immediate compelling reason for adoption of dimensional co-ordination in building was reduction of costs. Everyone would agree with that. It could not succeed unless applied also to the traditional building industry, because prefabricated building played so small a part on the whole.

Achieving Cost Reductions

Agreed basic dimensions would certainly achieve cost reductions, mainly in four ways: mass production of parts, which was important. This would reduce total stocks carried by builders' merchants and manufacturers, since the range required to be in stock would be reduced. Site assembly costs would be reduced consequent upon easier assembling of dimensionally co-ordinated parts; and there would be elimination of waste due to cutting by traditional methods. Further, costs of planning buildings and of measuring quantities would be reduced.

An excellent example of cost reduction possible due to mass production was the brick, a reduction that enabled brick building to be competitive at present.

Previously labour had been cheap and materials dear; that situation was now reversed, and would not revert—rather the contrary. Therefore efficient use of labour, in factory or on site, was essential to reduce building costs.

He agreed with Mr. Samuely the distinction between a module and a planning grid from the point of view of manufacturers of building components was insufficiently appreciated. A module must be a small unit to be of value to the manufacturer of component parts. Modules of over 36 inches meant nothing except in terms of planning grids. To be of value to the manufacturer dimensional co-ordination must give the requisite sizes of components and the increments in size applicable. In fact, the module was the increment, and must be of a size suitable for use in connection with such items as floor and roof tiles or windows and doors. There were good reasons for adopting a basic module of four inches or five inches.

The planning grid could be based on any convenient multiple of the module, and might well be standardised at some figure such as 40 inches. Several standardised planning grids might be necessary for the different types of building, and for different methods of construction, all related to the basic module.

For convenience the module should be the same vertically and horizontally.

FURNISHINGS

A Victory for the Contemporary Style

THREE Londoners in five prefer contemporary furnishings and decoration. That is the outcome of the DIA Exhibition at Charing Cross (London Transport) Station where over 30,000 visitors from February 25 to March 21 balloted between two identical rooms furnished at the same cost—one in contemporary style and one in the modern manner that the trade has found to be the most profitable.

The figures were:

Room R (Contemporary furnishings) ...	18,188
Room L (Best trade sellers)	12,146
Contemporary majority	6,042

Men favoured the "contemporary" room almost as much as women; in fact, the difference between the sexes was negligible. Nor was there as wide a gulf between young and old as had been expected. While 63 per cent. of the under 35's chose the contemporary room, it was also to the taste of more than half of the over 35's (53 per cent.). Strongest enthusiasts were the younger women, two in three of whom made it clear that furnishings of good contemporary design are their choice.

A test sample shows that the contemporary room won a smaller proportion of the votes of those who had bought £10 or more of furniture in 1952 than of those who had not (55 per cent. against 65 per cent.); but even these customers gave the room a straight majority.

The results (which were noted in *The Builder* last week) greatly exceed expectations. Though the DIA has realised for some time that the demand for furnishings in the contemporary manner is much greater than the proportion of space they obtain in most retail displays, it hardly expected an outright victory for its point of view.

The next task is to test the reactions of provincial cities, whose taste is said to differ widely from that of cosmopolitan London. The exhibition will be reproduced and a vote taken at Lewis's, Ltd., Market-street, Manchester, probably in May. It is hoped that discussions with retail stores in other cities may lead to further showings. Meanwhile any English, Welsh or Scottish body interested in staging a similar exhibition is invited to get in touch with the Secretary of the DIA, 13, Suffolk-street, SW1, Tel.: Whitehall 0540.

ANALYSIS OF VOTES

30,334 valid votes were cast. 60 per cent. voted for the "contemporary" room, as did 59 per cent. of the men, 61 per cent. of the women, 53 per cent. of the over 35's and 63 per cent. of the under 35's

Voters' Group	Room L (Best trade sellers) Votes	Room L Percentage of group total	Room R (Contemporary) Votes	Room R Percentage of group total	Group Total
Men	7,224	41	10,522	59	17,746
Women	4,922	39	7,666	61	12,588
Men and Women	12,146	40	18,188	60	30,334
Over 35	5,637	47	6,275	53	11,912
Under 35	6,413	37	10,913	63	17,326
Men over 35	3,470	48	3,781	52	7,251
Men under 35	3,750	39	5,809	61	9,559
Women over 35	2,167	46	2,494	54	4,661
Women under 35	2,663	34	5,104	66	7,767
Bought £10 or more furniture in 1952	650	45	800	55	1,450
Bought less than £10's worth	550	35	1,000	65	1,550

Notes: 1. Of the 30,334 who voted only 29,238 indicated their age group. This accounts for a slight discrepancy in percentages between the first three lines and the next six.

2. The analysis of votes by expenditure on furniture is based on a test sample of 3,000 votes.

COLOUR IN SCHOOLS

New Ministry of Education Bulletin

THE use of colour in schools is the subject of Building Bulletin 9, "Colour in School Buildings," published this week by the Ministry of Education (H.M.S.O., price 4s.). The purpose of the bulletin is twofold: to advocate a methodical use of colour and to present a new range of colours.

Every colour scheme requires the selection of a few colours from the thousands discernible by the human eye. The bulletin stresses the need to select these colours methodically and discusses the factors which should govern their selection; colour schemes are intended primarily for children rather than for adults and will differ from place to place in the school according to the different activities carried on; colour, if properly used, can help people to see well and comfortably, but, if badly used, it can impair vision; colour and lighting must therefore be considered together in the design of a new building; colour can emphasise, conceal, change or camouflage the appearance of things so that in designing the structure and surfaces of the building the architect should think in terms of colour as well as of form and space. The methodical consideration of these factors requires that colour be treated not as something applied when the building is complete, but as an essential element from the outset of planning.

The designer will be assisted in his task if he can identify and describe accurately the colours he wishes to use and if he can obtain supplies of materials quickly and economically to match his choice. The adoption of a suitable range of standard colours is essential. Existing ranges have, however, proved unsuitable. Most of them have not been designed specifically for architectural use and are often an arbitrary accumulation of colours. They do not always provide a balanced selection—there may be a predominance of creams, buffs and pastel colours, a large number of greens which are difficult to use and often unpleasant, isolated reds and blues, or a serious lack of good clear hues (such as bright yellows), neutrals and near-neutrals. Architects have therefore had to select from a number of different ranges or order "special" colours. In the main, moreover, there has been no commonly accepted reference system by which to describe and communicate colours unambiguously, a prerequisite of economical administration.

The Archrome Range

The bulletin therefore introduces a new range of 47 colours, each of which is illustrated. The aim has been to make a balanced selection large enough to satisfy the reasonable needs of school architects but small enough to be economically attractive. It has been called the Archrome (Munsell) Range. This range is the result of work by the development group in the Ministry of Education in collaboration with architects of London County Council and Hertfordshire County Council, officers of the Building Research Station and representatives of the paint industry. Paints based on the range are already commercially available and are in use in some areas. The range is not a Ministry of Education range and there is no question of the Ministry specifying its use in schools.

SAFETY IN BUILDING

Factory Inspector's Report

THE higher standard of cleanliness in industrial buildings brought about by the wider use of light paints and colour washes, is referred to in the annual report of the Chief Inspector of Factories (Sir George Barnett) which was published recently. The report begins with a survey of the changes in the industrial picture over the past 50 years. It states that at the beginning of the century colour was not thought suitable for factory buildings, and interiors, when not actually dirty, were usually gloomy and drab. Cleanliness had become much easier in recent years through the greater variety of paints available, the use of vacuum cleaners and of more suitable floorings. The reflective powers of light paints and colour washes in the treatment of walls, ceilings and machines had also contributed to better illumination and thus to a higher standard of cleanliness.

On the subject of safety, the report states that one development in the woodworking trade was an improved circular saw blade likely to result in a reduction in both the incidence and severity of accidents and a lessening of fatigue. Another was the introduction of large size guillotines with shear cutting blades.

Increasing popularity in the building trade of light-weight devices for raising loads to working platforms led to serious risks of collapse due to over-loading and manufacturers were co-operating by issuing advice about precautions to be taken. There was no doubt that the use of mechanical handling equipment besides leading to increased production, made a definite contribution to industrial safety.

The report stresses the importance of considering safety principles at the stage of planning, alteration or adaptation of factories, and points out that prior consultation with the Factory Department about likely risks may well be more profitable than afterwards trying to remedy faults which foresight might have avoided.

TENDERS FOR GREATER LONDON BUILDING

Reference to Monopolies Commission

AS announced in a written answer in Parliament on March 31, the President of the Board of Trade has asked the Monopolies Commission to report on certain practices relating to tenders for the construction of buildings in the Greater London area.

In this reference Section 6 (2) of the Monopolies and Restrictive Practices Act has been used for the first time. In the case of previous references requiring a report on public interest, it has been the Commission's duty to report comprehensively on this aspect of the conditions and practices found to prevail in the industry concerned. Under the Section 6 (2) procedure, the Commission —once they have established that the conditions prevailing in the industry are such as to bring it within the scope of the Act— are to report on the "public interest" aspect only of the particular practices specified in the reference.*

Any person or organisation wishing to offer evidence on the subject should write to the Secretary of the Monopolies and Restrictive Practices Commission, 3, Cornwall-terrace, London, NW1.

This is the 14th subject referred by the Board to the Commission. The Commission's reports on five of these subjects, i.e., dental goods, cast-iron rainwater goods, electric lamps, electric cables, and insulin, have already been published. Their report on matches and match-making machinery has been presented and awaits publication. Reports on non-ferrous metal semi-manufactures and on imported timber are expected to follow later in the year. Besides the recently announced requirement for a report (under Section 15 of the Act) on the general effect on the public interest of certain discriminatory trading practices† the other matters before the Commission are the printing of woven fabrics, certain electrical and allied machinery and pneumatic tyres.

Sir Alfred Hurst, replying to a representative of *The Builder*, said that while it would be improper for him to comment in detail on the remission of the matter to the Monopolies Commission, he could say that the Conference was very glad to have the opportunity of presenting its case to an impartial authority.

Timber Combustion

One of the most prevalent fallacies about timber is that it is highly inflammable material, apt to burst into flames at the slightest provocation. In order to dispel false ideas on the subject, the facts of timber combustion have been given in a booklet entitled "Timber and Fire Protection," published by the Timber Development Association, Ltd., 21, College Hill, EC4. Practical information is also given on modern methods of treating timber to improve the fire-retardant properties.

---

* These are :—

(*a*) communicating to a person other than the person calling for tenders for the construction of a building the amount of any proposed tender for such construction in accordance with any agreement or arrangement so to communicate;

(*b*) adjusting the amount of any proposed tender for the construction of a building in accordance with any agreement or arrangement between the proposed tenderer and any person other than the person calling for tenders for such construction.

† These include the practices which have been referred to in previous reports as "exclusive dealing" and "collective boycott."

IN PARLIAMENT

London Builders' Conference

ON March 31 AIR COMMODORE HARVEY asked the President of the Board of Trade whether he had yet decided to make a reference to the Monopolies Commission concerning the activities of the London Builders' Conference.

MR. PETER THORNEYCROFT said he had. Certain tendering practices, including practices operated by the Conference, were the subject of a new reference made to the Commission on March 27, 1953. The full text was as follows:—

BUILDINGS IN THE GREATER LONDON AREA

Whereas it appears to the Board of Trade that it is or may be the fact that conditions to which the Monopolies and Restrictive Practices (Inquiry and Control) Act, 1948, applies prevail as respects the supply in the area described in the schedule hereto of those new buildings which cost more than £1,000 each to construct;

Now, therefore, the Board of Trade in pursuance of Section 2(1) and Section 6(2) of the Act hereby refer to the Monopolies and Restrictive Practices Commission for investigation and report the matter of such supply. The Commission shall as respects such supply investigate and report on:—

(1) whether conditions to which the Act applies in fact prevail;

(2) if so, whether either or both of the following things are done by the parties concerned as a result of or for the purpose of preserving those conditions, that is to say, (a) communicating to a person other than the person calling for tenders for the construction of a building the amount of any proposed tender for such construction in accordance with any agreement or arrangement so to communicate; (b) adjusting the amount of any proposed tender for the construction of a building in accordance with any agreement or arrangement between the proposed tenderer and any person other than the person calling for tenders for such construction;

(3) if so, whether either or both of those things operate or may be expected to operate against the public interest.

SCHEDULE

The administrative counties of London and Middlesex; so much of Essex as consists of the boroughs of Barking, Chingford, Dagenham, East Ham, Ilford, Leyton, Walthamstow, Wanstead and Woodford, and West Ham; and the urban districts of Chigwell and Waltham Holy Cross; so much of Hertfordshire as consists of the urban districts of Barnet, Bushey, Cheshunt, and East Barnet; and the rural district of Elstree; so much of Kent as consists of the boroughs of Beckenham, Bexley, Bromley, and Erith; and the urban districts of Chislehurst and Sidcup, Crayford, Orpington, and Penge; and so much of Surrey as consists of the boroughs of Barnes, Beddington and Wallington, Croydon, Epsom and Ewell, Kingston-upon-Thames, Malden and Coombe, Mitcham, Richmond, Surbiton, Sutton and Cheam, and Wimbledon; and the urban districts of Banstead, Carshalton, Coulsdon and Purley, Esher, and Merton and Morden.

Steel Door Frames

On March 31 MR. ROYLE asked the President of the Board of Trade if he would take steps to submit the subject of steel door frames to the Monopolies Commission, as within the scope of the Monopolies and Restrictive Practices (Inquiry and Control) Act, 1948.

MR. HENRY STRAUSS said that the President would bear this suggestion in mind in considering matters for reference to the Commission.

Central London Building

On April 2, on the motion for the adjournment in the House of Commons, MR. K. ROBINSON raised the question of the decision to grant licences for £10m. worth of building in central London. He said that he wanted to urge on the Ministers concerned the need for absolute priority being given to the construction of flats in central London, over every other kind of construction. He estimated that by their action the Government were depriving the people of London of 5,000 flats which could be erected for the £10m. In St. Pancras, 70 per cent. of the population was sharing a dwelling compared with 15 per cent. for the whole country, and in the LCC areas there were nearly 200,000 on the housing lists, 70,000 of them in urgent categories.

MR. GIBSON said that no one was opposed to rebuilding of London, but there had to be priorities because of the housing difficulties in the area. This action by the Government was the beginning of an invasion into the supply of building materials and labour for London. Labour would be drawn from housing sites and that would be a crime. There was no urgency for this office accommodation.

MR. ECCLES, Minister of Works, said that new construction work was proceeding very well, and the aggregate of all types of building had been expanding steadily in the last year. The Government wanted to maintain the rhythm of expansion in step with increasing supplies of materials. The average amount of work fed into the London areas in 1950 was about £17,500,000 a month, now it was about £12,500,000, a reduction of about £60m. a year, so that the proposed sum of £10m. did not seem a large sum. The decision to ban buildings other than houses in London was deliberately taken to free workers to travel to the outskirts of London, where housing estates were being erected. That was sensible then, but it could not be pursued beyond a certain point. The Government conceded that there would not be enough work in London in the midsummer and autumn, and one quarter of the building workers of the country lived in the area. The housing programme had been expanding as fast, if not a little faster, than in the rest of the country. Last year 27,500 flats or houses had been completed, but most of them had been started by the Labour Government. This year it was expected that 40,000 would be completed. The increase was greater than the average for the country. But in spite of the repair work and the increase in housing the total volume of work had been declining steadily. Had there not been work on the Coronation a number of craftsmen would be free to-day, but much more formidable was the number of buildings being completed, because few licences had been issued for this kind of work in the last two years.

To have excluded London from the blitzed city procedure was a bad decision, because offices of the great companies played a most important part in our balance of payments. Every £1 earned by bankers, merchants, insurance brokers, or shippers

in oversea business was as good in paying for food as every £1 earned by visible exports. The Government in taking the action they did applied the criterion of choosing buildings which would strengthen the national economy. About 30 buildings would account for the £10m. The more important were the Baltic Exchange, two banks, including the Bank of England, two insurance offices, headquarters of a coal exporting firm, new headquarters for the Federation of British Industries and for the TUC and the diamond trade and a number of university extension works connected with laboratories and buildings where chemistry could be taught. About three-quarters of the £10m. would be within the boundaries of the city, and it would take about three years to spend this money. Six licences had already been issued and two were about to be. More large building projects were necessary because this kind of work would keep skilled craftsmen occupied and give opportunity to train apprentices. The TUC building would give much work to stonemasons. About 1,500 men would be occupied at the peak period, and unless this work was started that number of men might leave London or the industry. It would not be possible to erect factories in the area, and to build houses or flats would be a waste of sites.

Local Government Reform

On March 26, in the House of Commons, on the second reading of the Ilford Corporation Bill, which sought to give county borough status to Ilford, MR. MACMILLAN, Minister of Housing and Local Government, said it had not been possible to introduce a Bill last year to deal with the reorganisation of local government. It was clear that there would be no Bill in this session. In 1954, the Government had to introduce a Rating Bill, a Town and Country Planning (Part II) Bill, and several other measures. There could be no local government Bill this year, and they were led to the prospect of getting agreement, balancing or even exploiting their small majorities, to see whether one could be introduced in 1955. Any major reorganisation might well be done as a whole, but he had not given up hope that it might be possible to find a measure of agreement to introduce a Bill, so long as they were not too ambitious in their aims. He urged the House to reject the present Bill.

The Bill was rejected by 75 votes to 55.

Building Acts

On March 26 MR. BOSSOM asked the Minister of Housing and Local Government whether he was aware that the present arrangement whereby many large cities had their own individual building Acts, and many local authorities had the right to vary the building regulations, adds costs and delays from the inception to completion of a building; and if he would look into this matter to see if uniformity, as was the rule in certain other countries, could be adopted here.

MR. MACMILLAN said that only three local authorities outside London now controlled building solely by means of individual building Acts. Most authorities had made building by-laws based on the model series issued by his Ministry and those by-laws could not be varied by the authorities once they had been confirmed, except with his consent. This procedure had resulted in a valuable growth of uniformity which, he hoped, would go further in the revision now proceeding.

Training Centres

On March 30 MR. GILBERT LONGDEN asked the Minister of Works how many sites and buildings had been completed, and how many were left incomplete, when the building programme for rehabilitation centres for ex-servicemen was discontinued; what was the cost involved; whether he was satisfied that these sites and buildings were now being put to the best use; and how many of them had been handed over for development by private industry.

MR. ECCLES said he assumed that the question referred to the Building Trades' Training Centres which were set up after the last war to attract servicemen into the building industry after demobilisation. The building programme for these centres consisted of the adaptation of 11 existing Government Training Centres and the provision of 32 new centres, 30 of which were entirely new buildings. The cost of the programme was about £6,400,000. No buildings were left incomplete when the programme was discontinued at the end of 1947, but a few were altered during the course of erection to fit them for other uses. Of the 43 centres, 10 had been sold or leased in whole or in part to private industry. In the remainder are accommodated 16 Remploy factories, 13 rehabilitation units for the disabled, and 16 Government Training Centres. The remaining space had been allocated for various Government purposes with a consequent considerable saving in rents and building costs. He was satisfied that these centres were being put to the best possible use.

The Commons Chamber

On March 31 MAJOR MARKHAM asked the Minister of Works at what temperature and humidity he kept the atmosphere of the Chamber and the remainder of the new building.

MR. MOLSON, who replied, said that the air conditioning plant enabled them to maintain the air in the Chamber, the immediately adjoining lobbies and in the two floors below at a fairly steady temperature. Normally they maintained a temperature of 66 deg. and a relative humidity of 55 deg. In the course of late sittings the temperature was gradually raised so that it probably reached 70 deg. by about 6 a.m. The air in the Chamber was completely changed six times each hour. As soon as a division was called, the influx of air was directed into the "Aye" and "No" lobbies. It was difficult to avoid a substantial increase in temperature if several divisions follow immediately as 10 human bodies had the same heating effect as a one kilowatt electric fire.

Building Labour

On March 31, in reply to MR. SPARKS, the Minister of Works, MR. ECCLES, said that building labour for hospitals would account for less than one per cent. of the total. No figures of the distribution of building materials were available but the proportions might be assumed to follow broadly the figures for labour.

MR. SPARKS asked whether it was possible to increase the amount of building materials and labour, particularly for schools and hospitals development, as there had been in the past 12 months a very substantial reduction in building.

MR. ECCLES said that followed the investment programme, and the best of his information was that the programme was slightly bigger this year than last.

MR. WOODBURN asked the Minister to explain how, in the transfer of labour to housing, there had been such a large decrease in the amount of labour devoted to repair and maintenance of existing buildings.

MR. ECCLES said that the explanation was quite simple. It was that the war damage repair had gradually come to an end, as they could see from the figures issued by the War Damage Commission.

Decentralisation of London

On March 31 MR. SPARKS asked the Minister of Housing and Local Government to what extent population has been decentralised from the County of London and the inner urban areas of Greater London, respectively, since 1945; and what effect that had had upon overcrowding and congestion in those areas.

MR. MARPLES, who replied, said that up to the end of 1952 about 130,000 people had moved to the out-county estates of the London County Council, and the New Towns —of whom the greater number came from the County of London. The effect had been to reduce the population of the built-up areas of Greater London from the level reached in 1949. He took 1949 instead of 1945 because in the first four post-war years the population increased substantially as a result of demobilisation, return of evacuees and excess of births over deaths.

Rent-Restricted Houses

On March 31 MR. SPARKS asked the Minister of Housing and Local Government whether he could now announce what steps he proposed to take to render more habitable those rent-restricted dwellings now standing in urgent need of repair and maintenance.

MR. MARPLES said that the Minister was not yet in a position to make a statement.

REDEVELOPMENT IN CENTRAL LONDON

Major Schemes Proposed

WORK may soon begin on a number of major new buildings in central London for which plans have for some time been shelved. Mr. David Eccles, Minister of Works, has intimated that licences will shortly be issued for their erection under the £10 million development scheme for the central area.

One of the projects will be a new five-story office building at 14-20, St. Mary Axe, EC3, for the Baltic Exchange. The architects are Messrs. Kenneth Lindy, Joseph Hill and Partners, FRIBA. The area of the site of the proposed building is 9,000 sq. ft. and the value of the licence (which has not yet been received) is expected to be in the region of £220,000.

Mr. Victor Heal, MC, FRIBA, architect to the Bank of England, is also expecting to be able to carry out a further phase of his scheme for the Bank. A building for the accounts department is the next to be erected.

Another project which may be started before long is the Trades Union Congress Memorial Building to be erected on a site in Great Russell-street, WC1. In 1948, Mr. David du R. Aberdeen, BA, FRIBA, AMPTI, won the first prize of £2,000 in a competition for the design of this building. In their report, the competition assessors said of Mr. Aberdeen's design:—"Apart from it being a very practical solution of the problem, it possesses imaginative qualities both in plan and section, which should result in a building of which the TUC would have every reason to be proud and which should take a high place in contemporary architecture."

SOME ASPECTS OF BUILDING CONTRACTS—5

By NORMAN P. GREIG, BA, Barrister-at-Law, FIArb, FRSanI

Sub-Contracting

THE principle of the system generally used in England is that there is one main contract entered into between the employer and the contractor, and provisional sums and/or p.c. sums are included in the bills of quantities to be expended on sub-contracts by "nominated sub-contractors," i.e., selected by the architect or engineer. Hence no privity of contract is set up between the employer and the sub-contractor and the main contractor is responsible for the satisfactory completion of the whole contract work.

This system is not so well recognised in Scotland where contracts are usually let separately to the various trades, e.g., excavator, mason and brickwork, carpenter, glazier, slater, plumber, painter, etc. Also, work may be sub-contracted to certain specialised trades. [See Working Party Report, 1950, Chap. 1.]

Under our English system, where sub-contracting is undertaken under a formal sub-contract (e.g., the Sub-Contract for Building, sponsored by the NFBTE), it is clear that the contractor and sub-contractor should be bound by similar obligations to those that bind the employer and contractor under the main contract, so that the sub-contractor is liable to indemnify the contractor, as the latter is held responsible, for breaches of those obligations as well as for any loss or damage caused by the negligence of the sub-contractor, his agents and workpeople. Both the RIBA Standard Form of Main Contract, and the Sub-contract Form above mentioned, make provision for proper insurances to be kept up to cover claims for loss or damage in the above circumstances.

The Sub-Contract for Building assumes that the Sub-contractor (See Clause I) has had reasonable opportunity of inspecting the main contract, and is deemed to have notice of all its provisions (detailed prices in schedules and Bills of Quantities excepted).

The System Criticised

The above mentioned system of sub-contracting has obviously many advantages in that the control of the whole contract works is kept in the hands of one person, but, as was pointed out by the Simon Committee in 1941, and their opinion was endorsed by the Working Party in 1950, the *unnecessary* multiplication of sub-contractors may impair the main contractor's control over the works as a whole. The Reports of both these bodies definitely agree (see section 107 of the Working Party Report) that where specialists are selected by the architect or engineer they should, whenever possible, be chosen as the result of competitive tenders to a specification drawn up by them; and the practice of the specialist submitting his own design, and being appointed without competition, should be limited. The reason for such suggestion is that if tenders are not based upon the same design they "represent different things and different prices and comparison between them becomes difficult because operational and maintenance costs, life of structure or plant, factors of safety and general efficiency should all be assessed as well as the capital cost." The Report further emphasises that the considerable cost incurred by the tenderer in preparing designs for unsuccessful as well as successful tenders must be reflected in his prices.

On the other hand, as the Simon Report point out, there are certain cases where it is desirable for the architect or engineer to select certain specialists and nominate them as sub-contractors, viz.:—

1. Where the work must satisfy special requirements of the architect or owner (employer) as regards taste, quality or service, and

2. Where the work is an integral part of the general design and must therefore be detailed in advance of the placing of the main contract.

The Contractor as his own Sub-Contractor

Clause 21 (f) of the RIBA Standard Form provides that where the contractor *in the ordinary course of his business* carries out works for which prime cost or provisional sums are included in the Bills of Quantities, and *where items of such works are set out in the appendix to the Conditions*, and the architect is prepared to receive tenders from the contractor for such items, the contractor is to be permitted to tender for all or any of those items. Should the contractor's tender be accepted (and the employer is not obliged to accept the lowest or any tender), then he (the contractor) must not sub-let the work without the consent of the architect. It will be noticed that the exercise of this privilege is dependent upon the decision of the architect.

The Position of the Sub-Contractor

The RIBA Standard Form (Clause 21 (2) of the Conditions) emphasises the principle that though relief can be given to the sub-contractor by payment direct to him (see below) under the circumstances mentioned, there is no privity of contract established, and nothing contained in that Condition is to render the employer in any way liable to any nominated sub-contractor.

The basic principle is that under the RIBA form, as well as any of a similar kind, the sub-contractor must look to the contractor for payment for the sub-contract work. This can be unfortunate for the sub-contractor, who may find the contractor unable to pay him until he (the contractor) has been paid by the employer, and such final payment may be delayed for various reasons. Hence 21 (d) of the Conditions in the RIBA Standard Form provides that if the architect is wishful to secure final payment to any nominated sub-contractor before final payment is due to the contractor, and provided the sub-contractor satisfactorily indemnifies the contractor against any latent defects in the sub-contract work, the architect may in a certificate include an amount to cover such final payment. *The contractor* must then pay the amount certified, less only a cash discount of 2½ per cent., and the limit of retention money is to be reduced in proportion. The contractor is then discharged from all liability for the work or materials covered by the certificate, except for any latent defects. It is clear, however, that should the contractor become bankrupt before paying the sub-contractor, the latter could only claim for the sum due to him as an ordinary creditor in the bankruptcy.

Bankruptcy of the Contractor

It is when the contractor becomes bankrupt that the sub-contractor can be most affected, and it is usual in formal contracts to allow, as far as is possible, for this contingency, but it must be remembered that it is not possible to contract out of a legal obligation, i.e., the terms or conditions of a building contract cannot override the provisions of the Bankruptcy Acts, or those of the Companies Act relating to the liquidation of companies, with the object of defeating the rights of the trustee in bankruptcy, or the liquidator, as the case may be. In this connection it is impossible to include a provision that is of legal effect, under which the plant and tools, etc., of the contractor are to become the employer's property on the bankruptcy of the contractor.

In an engineering contract a clause was included to the effect that if the engineer had reasonable cause to believe that the contractor was unduly delaying proper payment to certain firms supplying machinery for the contract work, he was to have the power, if he thought fit, to order direct payment to them. It was held here that by presenting his own petition in bankruptcy the contractor had "unduly delayed proper payment," and that the engineer could order payment to the sub-contractor (*re Wilkinson, ex parte Fowler* [1905] 2K.B.713). The RIBA Standard Form, however, contains no such clause.

The Sub-Contractor and Fire Risk

Clause 15 of the RIBA Standard Form contains two alternative sub-clauses, (b) [B] providing for insurance against fire in connection with an existing building, the risk being solely on the employer. A footnote to Clause 5 of "Sub-Contract for Building," referred to above, contains some very valuable advice to both contractor and sub-contractor. It is that they shall satisfy themselves that the employer is adequately covered; for, if this be not so, and the employer is not a man of substance, the contractor, if fire occurs, may not only have to bear his own loss (under the main contract), but also be responsible for that of the sub-contractor as well (under that Form of sub-contract).

To conclude, it has been suggested that, to avoid the sub-contractor being at a disadvantage in regard to payment, under the existing Forms of contract and sub-contract, a Form could be devised under which, by making the employer a party to the sub-contract, the sub-contractor would be able to look for payment direct to the employer.

(*To be continued*)

INSURANCE OF CLERKS OF WORKS

Proposal to Insert Clause in Contracts

AT a meeting of the Institute of Clerks of Works of Great Britain Incorporated, held at the RIBA, 66, Portland-place, W1, on March 2, a motion was moved by Mr. G. W. HARRIS "To consider the advisability of asking architects and engineers and all who employ clerks of works, to incorporate a clause in conditions of contracts to cover the insurance of a clerk of works that comes within the meaning of insurance against accidents or other causes while engaged in the duties of a clerk of works." The motion was seconded by Mr. R. Evans, and after some discussion it was agreed that it be accepted and explored and a report presented in due course.

TENDERING PRACTICE

Eastern Counties Joint Board's Recommendations

THE second report, for the year ended March 31, of the Eastern Counties Joint Consultative Board of Architects, Quantity Surveyors and Builders, from which we take the following* extracts, gives an account of the Board's recommendations on tendering practice.

This subject, states the report, has been extensively discussed at meetings of the Board in the past year and it was decided to issue guidance on the number of tenders which should be invited for private housing. The Board considers that the average should be three and the maximum four unless there are special circumstances. The following alternatives are recommended on the notification of results of tenders:—

(a) Unsuccessful tenderers should be so informed; or

(b) unsuccessful tenderers on being informed should be given the name of the successful tenderer and the amount of the tender; or

(c) a full list of the names of all tenderers, with the amount of each tender, together with a note of the successful tenderer, should be sent to each firm.

Consideration was given at the March, 1953, meeting to matters currently under discussion in the industry and it was decided to place on record the Board's support of the following points:—

(a) Bills of quantities are confidential in character and should always be treated as such.

(b) The practice of selective tendering is a most desirable one and should be extended wherever possible.

(c) It would be undesirable to disturb the present equitable conditions of contract by the unilateral introduction of any other conditions which any responsible body might seek to put forward.

(d) The prompt notification of the results of tenders is of the greatest importance. In this connection it is appreciated that for housing work there may be a time lag pending approval by the Ministry of Housing of tenders recommended for acceptance, but means of expediting notification in these circumstances should be carefully considered.

Preparation of Specifications

The Board considered, the report continues, at one meeting, numerous examples of specifications worded in very general terms which made tendering extremely difficult. It is suggested that there should be in schedules provisional items for pricing which would be adjusted on measurement. The insertion of a provisional sum is recommended for items which could not be defined closely, providing they were not too substantial taking the contract as a whole.

Fluctuations: Wages

The Board has taken a very close interest in negotiations between representatives of the Industry and the Ministries concerned through the Ministry of Works Eastern Regional Joint Committee, on the computation on a percentage basis of wages fluctuations claims under Clause 25A of the RIBA Standard Form of Contract for housing work.

The introduction of this basis in the Eastern Counties as an experiment is welcomed by the Board which hopes that local authorities will give serious consideration to its adoption with resultant savings in administrative costs and, it is hoped, in tender prices.

Architect's Final Certificate

The Board was interested to learn that the RIBA Practice Committee had expressed to an architect in the region the opinion that an architect's final certificate implied that the examination in question had been carried out and, therefore, no further statement was necessary.

This point was raised as a result of a request by a borough treasurer that an architect should provide a more extensive final certificate setting out the extent of the checking of records which had taken place.

Nominated Suppliers

The Board considers it desirable to emphasise that orders placed with nominated suppliers under Clause 22 of the RIBA Standard Form of Contract by the main contractor on the instructions of the architect are on the basis of the conditions of sale set out in the estimate of that nominated supplier. Only those increases covered by the quotation should be accepted for passing on to the building owner, and notifications of increases in price from time to time should be brought to the notice of the architect right away. If a nominated supplier sought to include an increase not allowed for in the original quotation, then the account should not be admitted and the architect asked for instructions.

Nominated Sub-Contractors

The Board draws attention to the desirability in the light of the provisions of Clause 21(b) of the RIBA Standard Form of Contract of having specified in the Appendix under Clause 24(a) a period of 14 days or less for honouring certificates issued by the architect. The liability of the main contractor to pay sub-contractors within 14 days of the receipt of a certificate from the architect, in which amounts due to sub-contractors are included, results in these sums being financed by the main contractor where the period for honouring certificates is more than 14 days.

BUILDING RESEARCH CONFERENCE

Eastern Federation's Special Work

AN ACCOUNT of the Conference on Building Research, which was held in London on March 17, under the auspices of the National Federation of Building Trades Employers, is given in the Eastern Federation's Builders' Bulletin for April. Each Region was invited to appoint representatives, and about 70 were present, including members of the Building Research Station.

The National President (Mr. Wilfred Horsfall) opened the proceedings by welcoming the representatives and then calling on Sir Ben Lockspeiser, Secretary of the Department of Scientific and Industrial Research, to give the *opening address.

Each Region then gave an account of its work in disseminating research information, the Director of the Eastern Federation referring to some of the special work undertaken in the Eastern Counties — e.g., visits abroad, plant register, lecture programmes, the Ipswich housing experiment, etc. Discussion followed, during which members stressed the fact that the constructor was not the designer, and builders were in large measure dependent upon others for opportunities to employ new methods and materials.

The afternoon session opened with an address by Dr. F. M. Lea, Director of the Building Research Station, on the Tower Crane experiment at Norwich. This was supplemented by an interesting film on the work of the crane. Several members then gave an account of mechanical methods they employed, and questions were raised on the tower crane, particularly by Mr. M. J. Youngs who, as a Norwich contractor, worked on an adjacent site.

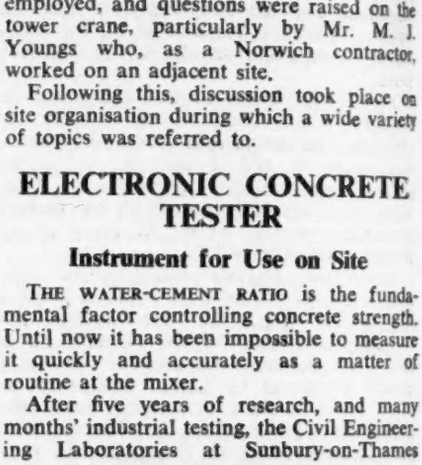
Following this, discussion took place on site organisation during which a wide variety of topics was referred to.

ELECTRONIC CONCRETE TESTER

Instrument for Use on Site

THE WATER-CEMENT RATIO is the fundamental factor controlling concrete strength. Until now it has been impossible to measure it quickly and accurately as a matter of routine at the mixer.

After five years of research, and many months' industrial testing, the Civil Engineering Laboratories at Sunbury-on-Thames



A sample of concrete under test.

have produced a water-cement ratiometer for testing concrete during its actual mixing.

Portable and weighing only 24 lb., the intruments is in two parts: a prodder, or canister, at the end of a tubular handle, and an instrument case housing the electrical circuits, control panel and batteries. On the base of the prodder are two electrodes near together. Inside is housed a small vibrating unit. On the control panel of the instrument case is a dial with a scale divided into "Too Wet," "O.K." and "Too Dry" segments, a multiple-open switch, vibrator unit, "Calibration" and "Adjusting" knobs.

A favourable report on the intrument has been made by the Building Research Station of the Department of Scientific and Industrial Research, so we are informed.

Shrewsbury Appointment

Mr. Alfred Thomas Morris, of the City Engineer's Department, Bath, has been appointed Borough Surveyor to the Shrewsbury Corporation. The post carries a salary of £1,400 rising to £1,600, plus car allowance.

* Copies of the report are obtainable on request from Mr. R. W. Porter, Hon. Secretary of the Board, 95, Tenison-road, Cambridge.

* Sir Ben Lockspeiser's address was reported in *The Builder* of March 20.

LIGHTWEIGHT CONCRETE IN AMERICA

BRS Report

AMERICAN experience of concretes made from lightweight aggregates is more extensive than British experience. The scale of production is greater, so is the range of aggregates used, and the use of lightweight concrete in building is much more widespread. A member of the staff of the Building Research Station visited the United States in 1950 to obtain first-hand information on American practice and the present report* is the result. It is based on information obtained from Government authorities and research organisations, universities, trade associations and private firms and individuals and by visiting manufacturing plants.

The principal lightweight aggregates used are clinker, expanded slag, expanded clays and shales, pumice, expanded vermiculite and perlite. The potential market for the aggregates greatly exceeds the supply, and there is a growing shortage of clinker due to the increasing use of pulverised fuel and oil firing for steam raising. This has encouraged the development of artificially expanded materials. The use of sintering processes for the production of lightweight aggregates from waste materials such as colliery shale and pulverised fuel ash, is also being investigated. Expanded clays in the form of rounded gravel-like particles are also produced.

In the concrete block industry the plain-pallet vibratory machines used in modern plants can produce between 600 and 900 blocks 16 in. by 8 in. by 8in. hourly. Blocks produced under American conditions are denser, stronger and better finished than the usual British block. As they are not so readily chipped or broken they give "cleaner" building. The uniformity of American blocks makes it possible to use them without a plaster coat and bare block walls are frequently used in offices, schools and churches. External walls are usually protected from rain penetration by two coats of cement paint.

Lightweight concrete blocks are popular in America because they produce a cheaper structure than would be obtained with other forms of masonry or brick construction.

As in Britain, problems due to shrinkage of the concrete units have to be overcome and this is done by drying the blocks before use and by constructional techniques which include the use of movement joints in walls and the provision of joint reinforcement or tie beams. In order to reduce the dead weight of buildings lightweight concrete has been used for flooring and for the fire protection of steel building frames. The resultant saving in structural steel depends on the height of the building and it is not easy to say at what point the saving more than offsets the additional cost of the lightweight concrete. The improvement of the live load to dead load ratio made possible in this way has been exploited in America for flooring and bridge decks. Lightweight reinforced concrete does not appear to be an economical alternative to normal concrete for the structural frames of buildings.

Expanded vermiculite and perlite are being widely used as aggregates in plasters because of the economies resulting from higher productivity and saving of deadweight. When used with gypsum plasters these very light aggregates give mixes which are highly fire-resistant and many large buildings have been built in which the steel frame has been fire-proofed by a lightweight aggregate plaster on metal lathing. Workers prefer to use the light material and it is claimed that substantial increases in output have been made where it is used in place of the normal sand-aggregate plaster.

* National Building Studies Special Report No. 13. "Lightweight Concrete in America," published by HMSO for DSIR, price 4s. 6d.

NOTTINGHAM BUILDERS AND MATERIALS SHORTAGES

Position Reviewed in Annual Report

THE annual report of the Nottingham and District Association of Building Trades Employers states that "The county cannot count on the highest efficiency from the building industry unless ample supplies of materials are readily available on the sites. There must be even greater effort on the part of manufacturers if the industry is to maintain and increase its production in the year ahead."

The report's comments on materials are:—

Steel. Even with permits, members have had difficulty in finding manufacturers who would accept orders. Manufacturers can still give no firm delivery dates.

Cement. Demands for cement from the industry have continued to overrun supplies, and quite a considerable proportion of the industry has been working on a hand-to-mouth basis. Supplies have improved, but are still insufficient for the Government's programme.

Bricks. The supply position has deteriorated during the year. Common bricks in particular are very short, which makes it impossible to progress contracts under such uncertain conditions.

Timber. The position is very confused as to how much imported timber can be expected during 1953. The remedy to which the industry is looking forward is the complete decontrol of softwoods.

So you've decided on

SLIDING DOORS

HOW about the door gear? There's a set for every need in the KING range —and every set has 'plus' features proved in thousands of installations — basic advantages in design, material, workmanship and finish that mean smooth running and long life. So when you specify door gear, specify and insist upon KING gear and make a tip-top job of it.

KING

SLIDING DOOR GEAR

Write for illustrated booklets to

GEO. W. KING LTD., 202 WORKS, HITCHIN, HERTS. TEL.: HITCHIN 940. AND AT STEVENAGE.

BUILDING WORKERS AND WAGE CLAIM

Large Majority Favour Arbitration

FIGURES issued on Wednesday by the National Federation of Building Trades Operatives on the ballot taken by the building workers' unions upon their rejected 6d. an hour wage claim showed a majority of over five to one in favour of arbitration rather than strike action. The voting was:

In favour of arbitration, 132,690.

In favour of strike action, 25,547.

ADVERTISEMENTS FOR TENDERS

Proposal to Specify Membership of LMBA

THE SUGGESTION that a clause be inserted into advertisements inviting tenders for building projects, specifying that applications must come only from members of the London Master Builders' Association, was made at the housing committee meeting of Wood Green Borough Council by its chairman, Cr. Mrs. Joyce Butler.

Officers of the Council have been asked to investigate the possibility and to report to next month's meeting of the committee.

From the discussion which followed the chairman's suggestion, it did not appear that any member of the committee was aware that there might be a builders' organisation other than the LMBA.

MR. L. B. VENNING, secretary of the Federation of Master Builders, told a reporter: "The LMBA has a London membership of about 1,500. The Federation has a London membership of 3,500. No Council could pass such a resolution. If they did we would take it up at a high level. We would not let a thing like that go through. It is a restrictive practice. It would not hold water."

CR. MRS. BUTLER said: "There are certain standards which the members of the Association apply, and other firms do not. As a local authority we should be quite certain that certain standards are applied."

DONCASTER CIVIC CENTRE

Approach to RIBA on Siting and Elevations

MR. L. J. TUCKER, Doncaster borough architect, has been instructed to approach the Royal Institute of British Architects on the siting and elevation of the civic centre. A letter had been received by the Corporation's finance and general purposes committee from the Doncaster Civic Trust suggesting a national competition for the design of the new civic buildings, and deploring that the new £750,000 college of further education, to be begun this year as the first part of the new civic centre, would be "a large building of indifferent quality." The national competition, they felt, would ensure that the excellent tradition of municipal building in Doncaster, exemplified by the Mansion House, built in 1745 by James Paine, would be maintained. As an alternative they suggested the services of an external adviser for co-ordinated architectural procedure.

The finance committee received and noted the communication, but the chairman, Alderman P. Judd, said there would not be a competition. The borough architect had been instructed to approach the RIBA on the understanding that there would be no delay in the building of the new technical college

NEWS IN BRIEF

LCC Development Plan

Objections relating to Lambeth, St. Pancras and Hampstead will begin to be heard at 10.30 a.m. on April 13, at the inquiry into objections to the development plan for the County of London.

Year Book

A Year Book for 1953 has been issued by the South West Region of the Federation of Master Builders, and contains, in addition to building tables and data, a diary for this year. Copies may be obtained from the Regional Secretary, 1, St. Paul's-road, Bristol 8.

Sale of Council Houses

Tenants of council houses at Grappenhall, Lancs, and at other places in the Runcorn rural district have been hold by the Council's representative that they must either buy their houses or be prepared to pay more rent to meet the increased cost of building and maintenance.

1953 Plastics Exhibition

The second British Plastics Exhibition and Convention opens at Olympia, London, on June 8. Over 80 firms will exhibit their products. The papers at the convention will cover subjects of interest to building, furniture and other industries. The exhibition closes on June 18 and the convention ends on the previous day, June 17.

National Parks Appointments

Mr. Harold Macmillan, Minister of Housing and Local Government, has made two additional appointments to the National Parks Commission. They are Brigadier P. B. E. Acland, chairman of the Devon County Agricultural Executive Commlttee; and Dr. Nancy Davies, of Aberavon, Cardiganshire, formerly an officer of the Welsh Board of Health.

Warning to Decorators

There is the danger that, during the coming year when the professional decorator might well enjoy a minor—though possibly temporary—boom, the causes of the slump in 1952 will be too hastily forgotten. That was the view expressed by Mr. Eric B. Calvert, chairman and managing director of Blundell, Spence and Co., Ltd., following the warning of Mr. W. R. Gillespie who, on behalf of the National Federation of Master Painters and Decorators, declared recently that the public was being given too much encouragement to decorate their own property and to dispense with the assistance of the professional.

Guide to Tower of London

To meet the needs of visitors to London during this Coronation year, the Ministry of Works has issued an illustrated authoritative Guide to the Tower of London (HMSO, price 2s.). Included in the illustrations is a double-page projectional layout of the Tower, which gives visitors a quick guide to the principal historic features they will wish to see. Another plan indicates the age of various portions, from Roman times to the 19th/20th century. The Ministry says that photographs of exteriors and interiors of the buildings, and of some of their historic contents, make of the guide the sort of souvenir that many visitors will want to post to "the folks back home."

BUILDERS' BENEVOLENT INSTITUTION

Annual Dinner

THE record sum of £3,000 has been received by the Builders' Benevolent Institution as a result of the appeal made by MR. EDWIN MCALPINE, this year's president of the Institution. Mr. McAlpine made this announcement at the BBI's 93rd annual dinner held at Grosvenor House, London, on March 31. In spite of this achievement, however, he said that he did not think builders, generally speaking, gave enough thought to those members of the industry who were in the unfortunate position of being in need of their assistance.

He hoped that in future they would give this matter more serious consideration and make a covenant so that, together with the tax allowance which could be claimed, contributions would be worth nearly twice as much to the Institution.

MR. HUGH MOLSON, Parliamentary Secretary, Ministry of Works, who replied to the toast of "HM Government" which was proposed by MR. W. HORSFALL, president, NFBTE, referred to the measure of freedom which the Government had given to the industry. He was glad to say that the increased production which the Government had hoped for when controls were relaxed, had been forthcoming.

Human relationships in the building industry, Mr. Molson remarked, were happier than in many others, and the industry's progress had not been hindered by large-scale strikes. It was important that full employment should be maintained, for if it were not the Welfare State could no longer function properly. Yet even with the Welfare State there was still a need for private benevolence, he declared.

Other speakers were SIR THOMAS BENNETT, CBE, FRIBA, who proposed the toast of the "Builders' Benevolent Institution and its President," MR. GERALD HILL, MIOB, president, LMBA, who proposed the toast of "The Visitors," and SIR HAROLD BELLMAN, MBE, JP, who responded.

ACCOUNTING & COSTING SYSTEMS FOR SMALL & MEDIUM-SIZED BUILDERS

Prepared by:

The National Federation of Building Trades Employers London, W.1

PRICE 5/- (by post 5/6)

Published by:

The Builder Ltd., Builder House, Catherine St., Aldwych, W.C.2

TEMPLE BAR 6251 (6 lines)

CIVIL DEFENCE IN LONDON

Opening of First Advanced Rescue Training Ground

THE County of London's first civil defence rescue training ground was opened in October, 1951, at "The Abbey," Campden Hill-road, Kensington. Since then four more have been opened—the "Vauxhall" ground at 148, Kennington-road, Lambeth; the "Dolphin" at Dolphin-lane, Poplar; and those at Sandford-street, Fulham, and Eton-avenue, Hampstead. Two more grounds are shortly to be constructed at Strathville-road, Wandsworth, and Nynehead-street, Deptford.

Each of these grounds is designed to reproduce the conditions under which the more common types of rescue operations would have to be carried out in war; and the grounds provide facilities for the basic rescue training of wardens as well as rescue section volunteers.

Since October, 1951, the number of volunteers for the rescue section of the County of London Civil Defence Corps has increased from 333 to 582, including 101 recruited during the past four months—which reflects the efforts of the Metropolitan Borough Councils in the national civil defence recruiting campaign, particularly in organising the house-to-house canvass. The LCC is backing up these efforts wherever possible by a poster campaign, encouragement of volunteers from the County civil defence division to undertake local canvassing, and appeals sent out with driving licences.

The campaign continues and results so far have been encouraging; peace-time strength of the rescue section calls for another 10,000 volunteers.

The LCC's staff of rescue training instructors have trained 1,100 volunteers, including large numbers of wardens, in basic rescue and 60 more are now undergoing training. The instructors have also completed the basic rescue training of 900 members of the City of London Police.

Advanced Training

For those who have volunteered for the rescue section and have completed the basic course, the next step is advanced rescue training, which requires a larger and more elaborate training ground. The first advanced rescue training ground in the London Civil Defence Region is to be opened at Bully Fen, on the edge of Hackney Marsh, on April 15, by Sir David Maxwell Fyfe, the Home Secretary.

The Bully Fen training ground will, in effect, be a technical school with classrooms, lecture room and buildings specially constructed to represent various types of bomb damage and will provide for advanced practical instruction in rescue operations—rescuing casualties from high up in a damaged building, tunnelling to extricate people caught under piles of debris, working in very confined spaces and using cutting plant to free people who are trapped.

Rescue work is essentially a life-saving service, and it calls for and promotes alertness and physical fitness as well as encouraging a practical knowledge of building construction.

The Bully Fen ground will be invaluable for the training of new instructors for civil defence rescue work and they in turn will speed the training of new volunteers joining the rescue section in increasing numbers. The LCC is also to assist the Metropolitan Police by training instructors in rescue work at Bully Fen.

NEW COMPANIES

THE FOLLOWING NEW COMPANIES, registered in England, have been announced by Jordan and Sons, Ltd., company registration agents.

Nudelers, Ltd. (516129.) Regd. Feb. 14, bldrs., contractors, etc. Nom. cap.: £100. Subs.: J. Herbert and C. Moore, 128, Albany-st., N.W.1.

Groves and Lee, Ltd. (516156.) Regd. Feb. 16, 47-9, The Hale, Tottenham, N.17, roofing, slating and tiling contractors, etc. Nom. cap.: £100. Dir.: G. T. Groves, 6, Bruce-gr., N.17.

Smiths Decorators (Stockton and York), Ltd. (516164.) Regd. Feb. 16, 216, Scotswood-rd., Newcastle-on-Tyne. Nom. cap.: £1,000. Dir.: T. D. Smith, 13, Belle Grove-terr., Newcastle.

Alabaster Builders, Ltd. (516175.) Regd. Feb. 17, 98, Church-rd., Bexleyheath, Kent. Nom. cap.: £1,000. Dirs.: S. H. Alabaster and Mrs. C. H. Alabaster, Kent Cottage, Ninhams Wood, Farnborough, Kent.

Davies, Marshall and Co., Ltd. (516180.) Regd. Feb. 17, bldrs., bldg. and public works contractors, etc. Nom. cap.: £1,000. Dir.: F. J. Marshall, 60, Moorside-rd., Davyhulme, Manchester.

Blockcraft Flooring Co., Ltd. (516224.) Regd. Feb. 19, Boston-hse., 132, Cheapside, E.C.2. Nom. cap.: £100. Sub.: Bessie Kaufman, 15, Lordship Park, N.16.

Harold Firth and Son, Ltd. (516233.) Regd. Feb. 19, Swallow-la., Golcar, nr. Huddersfield, bldrs. and contractors, joiners. Nom. cap.: £7,500. Dir.: E. Firth and Mrs. B. E. Firth, 62, Swallow-la., Golcar, nr. Huddersfield.

McFrancis and Williams, Ltd. (516243.) Regd. Feb. 19, glaziers, bldrs., shop fitters, etc. Nom. cap.: £100. Dir.: H. E. Osborn, 210, St. James-rd., Croydon, Surrey.

G. Camelia, Ltd. (516268.) Regd. Feb. 20, Evelyn Works, Colwick-st., Deptford, S.E.8, joiners, carpenters, etc. Nom. cap.: £5,000. Dir.: G. Camelia, 71, Bellingham-rd., Catford, S.E.6.

Ashcrofts (Wall and Floor Tiles), Ltd. (516284.) Regd. Feb. 21. Nom. cap.: £1,000. Dir.: H. A. Palmer, 24, Kilvert-dr., Sale, Ches.

E. H. O'Connor and Sons (Brentwood), Ltd. (516289.) Regd. Feb. 21, 306, Hoe-st., E.17, bldrs., etc. Nom. cap.: £1,000. Dir.: E. H. O'Connor, 14, Blakehall-rd., Wanstead, Essex.

Universal Parquetry, Ltd. (516306.) Regd. Feb. 21, 36, North side, Wandsworth Common, S.W.18. Nom. cap.: £1,000. Dir.: C. F. Jenkins, 27, Riverside-rd., Horsham, Walton-on-Thames.

Aerojacks, Ltd. (516310.) Regd. Feb. 21, 393, High-rd., Leyton, E.10, steeplejacks, lightning conductor erectors and maintainers, etc. Nom. cap.: £500. Dir.: F. L. Gadsby, 137, Betterton-rd., Rainham, Essex.

Horace Bowman, Ltd. (516771.) Regd. Feb. 4, 43, Trinity-st., Hanley, Stoke-on-Trent, bldrs., etc. Nom. cap.: £2,000. Sub.: J. W. E. Grundy, 9, Clumber-grove, Newcastle-under-Lyme.

Howell Jones and Richard Lloyd, Ltd. (516328.) Regd. Feb. 21, Kingsland-rd., Holyhead, Anglesey, bldrs. and contractors. Nom. cap.: £2,000. Dirs.: H. Jones, 2, Lon Deg, Holyhead.

Joseph Lovesay (Builders), Ltd. (516331.) Regd.: Feb. 21, 1a, Broadway-chbrs., 1281, High-rd., Whetstone, N.20. Nom. cap.: £100. Dir.: J. A. Lovesay, 1, Stuart-rd., Barnet.

Road Construction (Birmingham), Ltd. (516366.) Regd. Feb. 23, 201, Streetley-rd., Erdington, Birmingham. Nom. cap.: £100. Dir.: G. Stubbings, 14, Buryfield-rd., Solihull, Warwicks.

Pittaway and Lavers, Ltd. (516378.) Regd. Feb. 24, bldrs. and contractors. Nom. cap.: £2,000. Dir.: E. W. Pittaway, Devon Cottage, Underlane, Plymstock, Devon. Dir.: E. W. Pittaway, Devon Cottage, Underlane, Plymstock, Devon.

Roger Eaves and Son (Concrete), Ltd. (516381.) Regd. Feb. 24, 13, London-st., Fleetwood. Nom. cap.: £100. Dir.: Annie L. Eaves, 50, The Esplanade, Fleetwood, Lancs.

Hawkins (Liverpool), Ltd (516388.) Regd. Feb. 24, Wardrobe-chbrs., 146a, Queen Victoria-st., E.C.4, manfrs. of woodwork, shop and hotel fittings, etc. Nom. cap.: £100. Sub.: P. Anthony, 31, Aberdour-rd., Goodmayes.

Radiator Products Distributors, Ltd. (516394.) Regd. Feb. 24, Bond-st. House, 14, Clifford-st., W.1. Nom. cap.: £100. Dirs.: G. Allen and S. Allen, 6, Frognal-court., Finchley-rd., N.W.3.

Parquin Building Co., Ltd. (516463.) Regd. Feb. 26. Nom. cap.: £100. Subs.: Jean Herbert and Claire Moore, 128, Albany-st., N.W.1.

PERSONAL COLUMN

MR. JOHN L. COLLINS, secretary and legal adviser of Turner and Newall, Ltd., since 1934, is retiring from the position of secretary but retains the position of legal adviser. MR. A. D. N. JONES, Barrister-at-Law, at present an assistant secretary, has been appointed as secretary as from April 1.

The directors of Crompton Parkinson, Ltd., announce with regret the resignation of MR. ALBERT PARKINSON, MBE, as a joint managing director. Mr. Parkinson will remain chairman of the company.

MR. FRANK FOSTER, MSc, AMIEE, has been appointed general manager of Crompton Parkinson's "Cyc-Arc" Stud Welding Division.

HANDLING CEMENT IN BULK

Developments in Hungary

THE USE of transport-containers is undergoing considerable development in Hungary, both to save labour-time and to avoid unnecessary tie-up of rolling stock.

One of the most striking examples of what is being done is in the transport of cement. Owing to the big constructional developments in Budapest such as the new Underground, about 20,000 tons of cement have to be brought into the city every month. In a year this amount ties up 1,500 15-ton rail trucks, besides consuming millions of yards of bagging material made from imported cellulose.

In future the cement will be carried loose in barges along the Danube from the cement factory to a cement store of 10,000 tons capacity now being built on the river bank in the city. Automatic equipment will bring the cement into the store and pack it into one-ton transport-containers. Five hundred of these containers are being built. Mechanical handling equipment will place the containers on vehicles for transport to the building sites. The use of bags will be almost entirely eliminated.

Hungarian industry is turning out various types of containers in wood, metal, or a combination of the two. Their advantage is that they can be locked, and that they protect goods from damage, damp, fumes, theft or attacks by rodents. No nails or screws are used in their construction. Their use will mean a great saving in loading and unloading time, and the containers, it is reported, can be used over and over again.

Jaconello LTD.

TERRAZZO TILING
IN-SITU & PRE-CAST
Specialists
ALSO
ALL OTHER TYPES OF FLOORS SUPPLIED AND LAID IN ANY PART OF ENGLAND AND WALES

OFFICES & WORKS:
LONDON: VIC 3043 (4 lines)
BIRMINGHAM: EDGBASTON 1178 (2 lines)
BRIDGEND GLAM.: BRID. 736
READING: READING 81560
MANCHESTER: DEANSGATE 5971

TRADE NEWS

Work at Haraby House

Phillips Floors, Ltd., of Warner-road, London, S.E.5, inform us that they carried out the whole of the reinforced concrete frame and floor construction at Haraby House, Conduit-street, W. (illustrated in our issue of March 27), to first-floor level and above. Ordinary mild steel rounds were used.

Building Slabs

Details of their light-weight structural wood wool building slabs are contained in a series of technical information sheets produced by Stella Building Products, Ltd., Tudor-avenue, North Shields. These deal with the different potential uses of the "Stellith" slab as a self-supporting partition, channel reinforced roofing slab or permanent shuttering to concrete roofs.

Concrete Roof Tiles

A leaflet produced by Pegson, Ltd., Coalville, Leicestershire, gives details of their plant for the mass production of concrete tiles. They manufacture a single-purpose continuous production machine which is claimed to produce any one of several types of concrete roof tile at output rates varying from 2,000 to 4,000 tiles an hour. Other plant installations which can be supplied by the firm include counter current mixers, conveyors and ancillary equipment.

Linoleum Tiles

Details of a floor finish recently placed on the market by Burtain, Ltd., 16, Sheldon-street, W2, are given in an illustrated brochure available from the firm. Marketed under the name "Econolin," the finish is in the form of inlaid linoleum tiles mounted on damp-resisting underfelt and measuring 9 in. by 9 in. or 12 in. by 12 in. They are claimed to be easy to cut and simple to lay, and special adhesives are supplied with the tiles, which are available in a range of colours.

Insulation Fibres

It has been announced by the Cape Asbestos Co., Ltd., 114-116, Park-street, W1, that they have completed arrangements for the production of inorganic fibres from natural rock to be marketed under the trade name of "Rocksil." These fibres have a silken appearance and are understood to possess a high tensile strength; and when made into mats offer high resistance to heat, cold, and sound transmission, withstanding temperatures up to 1,400 degrees F. Production will take place at Stirling, and the sole distributors of the material will be William Kenyon & Sons, Ltd., Dukinfield, Cheshire.

Reinforcement Cover

As a means of measuring the depth of reinforcement below the surface of hardened concrete without destruction, Kolectric, Ltd., 73, Uxbridge-road, Ealing, W5, have produced the "Covermeter" in collaboration with the Research and Development Section of the Cement and Concrete Association. This instrument operates by measurement of the reluctance of a magnetic circuit, and is claimed to determine the longitudinal axis of the reinforcement as well as its exact location; to be portable and suitable for both laboratory and field use by an unskilled operator. It indicates the cover to reinforcement from 0-2 in. (0-5 cm.), and may be operated from AC mains or 6-volt accumulator.

OVERSEAS BUILDING

[From Our Own Correspondents]

* *Australia.*—The New South Wales Public Works Department has issued a call for tenders for the construction of the Diversion Tunnel for the Adaminaby Dam of the Snowy Mountains Scheme. The tunnel is to be concrete lined approximately 2,300 ft. long by 25 feet in diameter. The closing date for the receipt of tenders is May 18 next, and tenders should be addressed to the New South Wales Public Works Department, corner of Bridge and Phillip-streets, Sydney. A copy of the specifications and plans is available for inspection by representatives of UK contractors at the office of the Agent-General for New South Wales, 56-57, Strand, London, WC2. Contractors are requested to quote reference F 6635 on application to the Agent-General's office. Any inquiries by telephone should be made to Trafalgar 8855, Ext. 2413.

Belgian Congo.—A Norwegian firm is to supply 75 prefabricated houses for erection in the Belgian Congo. Each house will contain four flats. It is estimated that the houses can be erected at the rate of nine a week. The contract was won in competition with 157 firms abroad.

China.—Construction in North-East China will, this year, amount to 82 per cent. above 1952. This is interesting from the point of view of the British exporter of building materials as the Chinese are anxious to import these items from the UK and it is believed that some firms have already taken the lead in inquiring from the Chinese just what they require. Metallurgical mills, coal mines, power stations and other heavy industrial enterprises, higher educational establishments, research institutes and workers' housing are among the major construction projects for this year. Further information, we are informed, can be obtained from the British Export Corporation, London, W.1, a firm which has been handling business for China.

Construction has also begun on all projected public buildings in Lhasa, capital city of Tibet, now a part of China. The new buildings covering a total floor space of 16,000 square metres include an up-to-date cinema and factories.

New Zealand.—It is officially reported that the New Zealand Government has almost completed the purchase of a block of 295 acres for State houses at Porirua, near Wellington. It will provide about 600 sites.

South Africa.—It was announced in Cape Town on April 7 that the tender of George Wimpey and Co., of London, had been accepted for the construction of a dam at Wemmershoek, about 40 miles from Cape Town. The firm's tender, £1,890,434, for the biggest single contract ever put out by Cape Town, was the lowest among 16 competitors from the United States, South Africa, Britain, Germany, Holland, France and Switzerland.

South Africa.—Plant worth £40m. is to be erected in South Africa to serve the 16 uranium mines there according to the South African Minister of Mines, Mr. J. H. Viljoen. The producing mines extend from the East Rand to the West Rand and also to the Free State Goldfields, and the new buildings will be erected in that vicinity. It is also estimated that the supply of electricity required for this development will cost about £8m. In view of the proposed erection of a large power station to serve the whole of the Eastern Transvaal and probably also the Portuguese territory, the Government has decided to prospect for coal in the region. Drilling is to start in July. Meanwhile, plans are being made for erection of buildings in the area to keep pace with the mining developments and in time it is certain that a small township will spring up.

The City Council of Pretoria has now decided to spend £850,000 on native housing.

USSR.—New buildings are constantly going up in Petrozavodsk, the capital of the Karelo-Finnish Soviet Republic and the city streets are being improved. Uritsky-avenue, which starts at the shore of Lake Onega, was badly damaged in 1944 by enemy action. To-day the avenue is lined with fine stone buildings, one of the latest being the Technical School of the Timber Industry. A music school, a big public library and the Trade Union House will be completed by the end of 1955, and the city will see its first tall buildings. A large park is to be laid out in the centre of the town, by the Lake Onega embankment. . . . A modern hospital with up-to-date equipment is to be built in the Kalinin district at Tallinn in Soviet Estonia and new medical institutions and hospital wings are being built in a number of other towns.

Zanzibar.—A scheme estimated to cost £250,000 has been approved which will involve the erection of a new power station with the construction of sub-stations to be connected with high-voltage underground cable. It is estimated that the period of building will be from 9-12 months, and it is hoped the power station will be in full operation by the middle of 1954. It is reported that a UK company has secured the contract.

Tenders have been invited for the construction of a 90-ft.-high lighthouse on the south-east coast of the island at Ras Nakunduchi. This lighthouse was projected many years ago, but construction was held up owing to the war. It is considered that it will be of great assistance to ships approaching and sailing from Dar-es-Salaam via the east coast of Zanzibar.

* From the Board of Trade Special Register Information Service.

★ DOHMICULITE
PLASTIC
WITH
VERMICULITE
gives
SATIN SMOOTH
FLOORS
FOR FACTORIES, SCHOOLS, HOSPITALS, FLATS AND HOUSES
INSULATION ★
BRIGHT COLOURS ★
HARD WEARING ★
THE CHEERFUL PLASTIC FLOOR YOU WISH FOR
DOHM LTD. 167, VICTORIA ST., LONDON, S.W.1 VIC. 1414-5-6 & 7913

The SCOTTISH BUILDER

Home-grown Timber: Softwood Consumption Licences

TO facilitate the disposal of softwood arising from the gale devastation to forests in NE Scotland, softwood licences issued to consumers in Scotland and Northern England (the counties of Northumberland, Cumberland, Durham, Westmorland, and the North Riding of Yorkshire) will be endorsed as available "for home-grown timber only" wherever this appears reasonable to the licensing authorities. Consumers who receive such licences may return them to the issuing authority and ask for cancellation of the endorsement, only if:

(a) home-grown timber is not available, or is technically unusable for any or all of the purposes for which the licence was issued or

(b) it can be shown, by quotations, that satisfactory imported softwood is obtainable more cheaply than home-grown, or

(c) consumption will actually take place outside the area defined above.

Brick Supplies

ALLEGATIONS that bad distribution of bricks was causing heavy expense to local authorities in the east and west of Scotland, were made recently by a member of Edinburgh Corporation Housing Committee, Councillor A. D. Jameson. It was agreed that the matter should be explored with the National Coal Board, who are the biggest suppliers of bricks in the country.

Councillor Jameson said that from local brickworks, authorities like Edinburgh were paying 130s. per thousand. But because they could not secure sufficient supplies locally, they had to bring more in from the west. And that put another 50s. a thousand on the price. The same thing, he maintained, was happening in the west.

"We are finding bricks being run from Edinburgh, and passing other lorries on the Glasgow road bringing bricks into Edinburgh," he said. "Where is the sense in it? How can we bring down the prices of houses if this is going on?"

The Housing Executive Officer, Mr. M. Murchison, said although the Coal Board was very helpful, it did not alter the fact that Edinburgh could not get all the bricks that were required.

"Therefore," he remarked, "we have to authorise contractors to bring them from outside, and for these we have to pay 180s."

Houses for Owner-Occupation

TOO FEW HOUSES are being built for owner-occupation to-day, said COMMANDER T. D. GALBRAITH, MP, when he spoke to the Scottish Group of the Building Societies' Institute at Bridge of Allan on March 28. "We must find ways," he said, "of encouraging more people to build or buy houses for themselves."

He emphasised that the Government had no intention of interfering with the building programme of houses to let, for they were essential in increasing numbers if our desperate housing problem was to be solved. At the same time the Government firmly believed that there was much room for

expansion of house ownership. It seemed to them quite wrong that the present proportion of one private-enterprise house for every 12 or more council houses should continue.

One argument which he advanced in support of the plea for more houses for owner-occupation was a "moral" one.

"There are families," he said, "enjoying large incomes who are occupying local authority houses at relatively low subsidised rents. These people can well afford to provide accommodation for themselves and should not be housed at the expense of the rest of the community.

"We can, I think, learn something useful by looking at the way they handle this problem in other countries," he continued. "Recently I received a newspaper cutting from a prominent Canadian newspaper giving the details about a big new housing project in the province of Ontario. One of the conditions of tenancy was that any family with an income more than six times the prescribed rent should be ineligible. This meant that those whose income was above a certain figure were altogether excluded from the benefit of State housing and had to find accommodation for themselves.

"In Scotland conditions are very different. From the latest available figures I find that on average only 1/18 of income is being spent on rent; we are, in fact, on average, spending less on rent and rates than on either drink or tobacco. It is, indeed, quite clear that a great many families are putting less than 1s. in the £ of their income to rent. In the light of these facts surely we are losing our sense of values.

"Do let us recognise that when a man builds a house for himself he benefits not only himself but every ratepayer and taxpayer in the country, not only this generation but the one that is to follow, for the house will certainly outlast his lifetime. Even if his family continue to occupy it they are a part of the community for whom houses must be provided."

Hospital Building

AFTER making a reduction of £86,620 in the capital sum allocated for continuing and new works, the South-Eastern Scotland Regional Hospital Board propose to spend £602,199 on their building programme for the current year.

Maintenance expenditure will account for £225,000, and the total for capital works is £377,199. New schemes proposed have been reduced by £40,475, and continuing schemes by £46,500.

A sum of £100,000 has been approved in respect of the Radiotherapy Institute at the Western General Hospital, Edinburgh. The Secretary of State considers that within the total capital allocation the board will be in a position to make a start on four priority schemes in Fife, already approved, and he is anxious that, if at all possible, the board should make a start this year on the scheme for the erection of a teaching unit at the Western General Hospital.

Housing in Aberdeenshire

THE 1951 Census report on Aberdeen County, the first of a series on Scottish Counties, has been published by the Stationery Office, price 11s. 6d., and discloses some changes which have taken place in the last 20 years, among which is a decline in overcrowding, the proportion of people living more than two to a room having been reduced from 16.8 per cent. to 7.8 per cent.

The betterment in regard to housing conditions has been marked enough to be worthy of note. The total number of houses in the county was 37,109—an increase of 3,586, or 10.7 per cent., compared with the 1931 figure. In the 20 years the number of occupied private houses rose from 33,523 to 37,109, while the number of people living in private houses decreased by 1.3 per cent. There has thus been a substantial improvement in the amount of accommodation available per person.

The average number of persons for each house was 3.75, while in 1931 the comparable figure was 0.45 higher at 4.20 persons per house. This is equivalent to a decrease of 10.7 per cent. in the average number of persons per house in the county.

February Housing Figures

THE NUMBER of new houses completed in Scotland in February was 2,639, an increase of 1,081 over the same month last year. This brings the total completed in the first two months of this year to 5,465 compared with 3,790 in 1952, and 3,181 in 1951. These figures are shown in the Monthly Housing Return issued by the Department of Health for Scotland and the Ministry of Housing and Local Government which were published on April 1.

The total of new houses built in Scotland under the post-war programme now stands at 182,413 (150,237 permanent and 32,176 temporary).

Council's Sites Problem

INVERNESS Town Council Housing Committee have been told by the Department of Health for Scotland that Commander Galbraith will meet their deputation at St. Andrew's House, Edinburgh, on April 24.

The interview had been sought to enable Inverness to lay before the Secretary of State for Scotland certain problems of siting housing schemes which had arisen as a natural result of the failure of the town council to have confirmed the proposed compulsory purchase of the Milton of Culcabock land, and agricultural area lying within the burgh.

The compulsory purchase order was opposed last year by the proprietors of the ground, and a public inquiry found in favour of the land owners.

Improving the Forth Ferry

PROPOSALS for improvement of the Forth ferry service have been made by the Scottish Board for Industry. They involve alterations to the present vessels and provision of increased loading facilities. Blyth and Blyth, Edinburgh, consulting engineers, propose new landing stages for both banks to allow more than one ferry boat loading or landing at peak periods. In each case a second berth is proposed. The Board stresses that it is not a substitute for a Forth road bridge, but a necessary alternative until that bridge is built, and a move justified by the immense volume of traffic which crosses this firth annually.

NEW BUILDINGS

Aberdeenshire.—County A to prepare scheme for conversion of the former Udny Academy into housing accommodation. Also 20 police houses to be built on two sites at Kincorth housing estate, Aberdeen, and another four in other parts of the city.

Dumbartonshire.—Plans in the hands of their own staff architects for alterations and additions to be carried out at South-st., Scotstoun, by Alexander Stephens & Co., Ltd., shipbuilders, Glasgow.

Elgin.—Plans to be prepared for new scheme of houses to be erected at Bishopmill adjoining Cooper-st., for which the corporation architect is G. N. Blanc, Master of Works Offices, Elgin.

Fifeshire.—Plans in the hands of the council architects for 20 houses to be erected at Lower Largo.

Fifeshire.—The Corporation of Kirkcaldy to have plans prepared for 50 houses which are to be erected at the Templehall housing site. The architect is Robert Meldrum, AMTPI, AMInstCE, Burgh Surveyor's Office, Whitecauseway, Kirkcaldy.

Glasgow.—Plans to be prepared for F. J. Beveridge & Co., Ltd., for additions and alterations and new building at North Wallace-st. The architects are F. J. Dallachy & Beveridge (A&A), 248, West George-st., Glasgow.

Glasgow.—Plans in hand for new halls, for which the architects are John Laird & Son (A), 87, St. Vincent-st., Glasgow.

Glasgow.—Plans in hand for new gymnasium and dining department which are to be erected at a site in the Anderston District East. The architect is John MacNab (F), 129, Bath-st., Glasgow.

Glasgow.—Plans are to be prepared for the Gas Board's new buildings which are to be erected at Dawsholm Gas Works, Maryhill. The designers are F. A. MacDonald & Partners, concrete and civil engineers, 11, Woodside-cres., Charing Cross, Glasgow.

Glasgow.—Corporation to have plans prepared for new school to be erected on the Old Crookston Farm site, Watson, Salmond & Gray (F&A), architects, Central Station-bldgs., Union-st., Glasgow. Gladstone, Browne & Muir, FF.RICS, quantity surveyors, 103, Bath-st., Glasgow.

Greenock.—Plans to be prepared by their architects for a new church which the Church of Scotland is to build at Auchneach, Larkfield district.

Greenock.—Plans in hand for 18 houses to be erected at the Stoneleigh housing site, for which the architect is Robert L. Rankine, AMTPI, AMInstCE, Municipal-bldgs., Wallace-sq., Greenock.

Hamilton.—Plans in the hands of the architects to the Church of Scotland for new church halls, etc., to be erected at Neilston-sq.

Hamilton.—Lanarkshire CC to have plans prepared for new school buildings at Hamilton Academy, for which the architect is William Watt (F), County Offices, Albert-st., Motherwell-Wishaw.

Lanarkshire.—Plans in the hands of East Kilbride Development Corporation for the erection of over 90 houses at the Mains housing site, for which the architects are Scott, Hudson & Raey (F&F), Torrence House, East Kilbride.

Lanarkshire.—Plans in hand for new commercial garage, offices and workshops which are to be erected at Nitsdale by J. H. Young & Co., Ltd., Nitsdale.

Lanarkshire.—Plans in hand for new Stonehouse church halls, for which the architect is W. R. F. MacPhee, Stonehouse

"STIC B"
STONE COVERING
A DECORATIVE AND WATERPROOFING
TREATMENT FOR CONCRETE CEMENT RENDERING BRICKWORK, ASBESTOS, ETC.
"STIC B" PAINT SALES LTD.
47, WHITEHALL, S.W.1
WHITEHALL 9958

The Builder FUTURE CONSTRUCTION

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

APRIL 14.

***†Worcs CC.**—Infants' school at Birchen Coppice, Kidderminster, est. cost £35,000. Yorke, Rosenberg & Mardall, 2, Hyde Park-pl., W2. Dep. £2 2s.

APRIL 15.

***†Stratford-on-Avon RDC.**—36 houses, 20 bungalows and 16 flats, Goose-la. site, and 28 houses and 8 bungalows, Quinton Village site. L. C. Wakeman & Ptnrs., quantity surveyors, 126, Hagley-rd., Edgbaston, Birmingham, 16. Dep. £2 2s. Tenders by April 30.

***†Worcs. CC.**—Sec. mod. school at Witton, Droitwich. County A, 14, Castle-st., Worcester. Dep. £5 5s. Tenders by May 19.

APRIL 17.

***†West Ham BC.**—27 flats, 6 houses and 2 garages at Barking and Bushey-rd., E13, contract 182. Boro' A, 70, West Ham-la., E15. Dep. £2 2s.

***†West Sussex CC.**—House, office and garage on Shoreham Beach estate at corner Beach Green/Weald Dyke, Shoreham-on-Sea, job No. 3,097. County A, Chichester.

APRIL 18.

***†Bridgwater BC.**—8 houses on Sydenham estate. Boro' A. Dep. £2 2s.

***†Coventry Corporation.**—39 shops, 101 flats and 5 maisonettes, Willenhall. A. H. Gardner and Ptnrs., 11, Eaton-rd. Dep. £3 3s.

***Folkestone BC.**—New bar and alterations to East Cliff Pavilion. BE. Dep. £2 2s.

***†Salop CC.**—Welfare centre at Dawley. County A Column House, London-rd., Shrewsbury.

APRIL 20.

***†Harpenden UDC.**—8 shops with maisonettes over, Batford estate. J. H. Leech, E&S. Dep. £1 1s. Tenders by May 25.

APRIL 21.

***Tonbridge UDC.**—32 pairs of houses, two contracts, Higher Wood estate. E&S. Dep. £3 3s. each contract.

***†W. Sussex CC.**—Primary school at Tangmere, nr. Chichester, job. No. 2,954. County A, Chichester.

APRIL 22.

Ampthill RDC.—Erection of 16 flats at Greenways, Flitwick. E&S, Council Offices, 12, Dunstable-st., Ampthill. Dep. £2 2s.

***†Hants Police Authy.**—Police house with office, Preston Candover, near Basingstoke. County A, Winchester. Dep. £1 1s.

***Southampton Co-op. Soc., Ltd.**—Alterations and additions forming new dairy premises at 236, Shirley-rd. Gen. Mgr., 122, St. Mary's-rd. Dep. £2 2s.

APRIL 24.

***Reading BC.**—Eight police houses on Bath-rd. estate. Boro' A. Dep. £2 2s.

***Surbiton BC.**—Public convenience, Hook-rd. R. Thirlway, BE&S.

***†West Sussex CC.**—Secondary modern school at Southbourne, nr. Chichester, job No. 2,380. County A, Chichester.

APRIL 25.

***Saffron Walden RDC.**—22 houses at Stansted Mountfitchet, two contracts. Clerk of the Council.

***Totnes BC.**—22 houses on Pathfields estate. BE. Dep. £2 2s.

APRIL 27.

***Lincoln CC.**—Conversion of cloakrooms to classrooms at Kesteven and Grantham Girls' School. County A, Sleaford.

***Wood Green BC.**—Six flats, Winkfield-rd., N.22. BE&S. Dep. £2 2s.

APRIL 30.

***Bath City C.**—20 dwellings at Moorlands estate. City A, 7, North Parade-bldgs. Dep. £2 2s.

***Berkshire CC.**—Completion of new sec. mod. school at Park House, Andover-rd., Newbury. County A, Wilton House, Parkside-rd., Reading. Dep. £2 2s.

***Brighouse BC.**—62 houses and 22 bungalows, Rastrick estate. BE.

MAY 2.

***Hornchurch UDC**—52 houses, Upminster Park estate, Cranham. S. Dep. £2 2s.

MAY 4.

***Chertsey UDC.**—50 houses at Bittams-la., Little Green-la., with outhouses, etc. E&S. Dep. £1 1s.

Dartford BC.—50 dwellings and 8 garages, scheme 5, on Temple Hill neighbourhood unit. TC. Dep. £2 2s.

MAY 6.

Newbury RDC.—Six old people's dwellings at Southend, Cold Ash. Floyd, Robson and Paul, architects, St. Nicholas House, West Mills, Newbury. Dep. £2 2s.

MAY 11.

***Chippenham BC.**—23 bungalows, etc., Greenway-la. estate. BS. Dep. £2 2s.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

APRIL 14.

***Leyton BC.**—Painting and repairs to schools. BE&S.

MAY 1.

***Bootle BC.**—Heating installation, etc., County Grammar-Technical school, Netherton. BS.

NO DATE.

***Sutton Coldfield BC.**—Replacement of present oak flooring at Ballroom, Town Hall. BS.

ROADS, SEWERAGE AND WATER WORKS

APRIL 22.

Southend-on-Sea BC.—Surfacing in Marine-parade and Belton-way, Leigh, and part of High-st., Shoeburyness. BE&S.

APRIL 24.

***†Stratford-on-Avon RDC.**—Sewers and tarmacadam road, Goose-la., to serve 74 dwellings, and Quinton Village for 36 dwellings. L. C. Wakeman & Ptnrs., quantity surveyors, 126, Hagley-rd., Edgbaston, Birmingham, 16. Dep. £2 2s. Tenders by May 11.

APRIL 27.

Oldbury BC.—Site works in connection with the erection of aged persons' dwellings at Pound-rd., BS. Municipal Bank-chbrs., Oldbury. Dep. £2 2s.

MAY 4.

Andover RDC.—Construction of three miles of spun-iron water mains, with fittings. Howard Humphreys & Sons, 191, Victoria-st., Westminster, SW1. Dep. £3 3s.

Peterborough City C.—4,600 yds. sewers; 1,100 yds. rising mains; and construction of sewage pumping station and ancillary works. J. D. & D. M. Watson, MM.ICE, 18, Queen Anne's Gate, Westminster, SW1. Dep. £5 5s.

Woodbridge UDC.—R.c. water tower, 150,000 galls. capacity, at council's waterworks, Bredfield-rd. Rofe and Rafferty, engineers, 3, Victoria-st., Westminster, SW1. Dep. £2 2s.

MAY 23.

Kerrier RDC.—Laying of 19,900 lin. yds. of pipeline in connection with Lizard water scheme. Herbert Lapworth & Partners, 25, Victoria-st., Westminster, SW1. Dep. £5.

JUNE 12.

Wednesfield.—Works of sewerage and sewage disposal. A. H. S. Waters, MInstCE, engineer, 25, Temple-row, Birmingham, 2. Dep. £5 5s.

AYGEE
PATENT GLAZING
in
aluminium alloy
IMMEDIATE DELIVERY!
AYGEE LTD.
100, Westminster Bridge Road, LONDON, S.E.1
Phone: WATerloo 6314 (10 lines)
England's Largest Glazing Contractors

GENERAL BUILDING WORK (LONDON)

Barking.—Hostel.—BC propose to erect aged persons' hostel in Ripple-rd. Plans prepared by Boro' A.

Bloomsbury.—Laboratory Extensions.—Extensions are proposed for the chemistry laboratory at University College, London. Architects are Richardson & Houfe, 31, Old Burlington-st., W1.

Camberwell.—Church.—The war-damaged church, St. Luke's, is to be rebuilt. Rev. W. B. Duckworth is the incumbent.

Dagenham.—Factory.—TP permission has been granted to erection of factory on Hainault industrial estate, for Allied Metals, Ltd., 62, London-wall, EC2.

Dagenham.—Shops and Flats.—BC are to proceed with scheme for erection of shops and flats in Whalebone-la./James-ave.

Dagenham. — Commercial Building.—BC have approved the erection at Dagenham Dock, proposed by S. Williams & Sons, Ltd., 8, Lloyds-ave., EC3, of a road transport building, petrol filling station, covered space and temporary lobby and office.

Dagenham.—Factory.—Proposals for a factory on Hainault industrial estate, made by the Mica & Micanite Supplies, Ltd., Mica House, Barnsbury-sq., N1, have received TP consent.

Dagenham. — Commercial Building. — Proposed single-storey building at Rainham Works, Rainham-rd. South, for Ford Motor Co. Ltd., has received BC's approval.

Dagenham. — Dwelling-Houses. — BC have approved erection of 16 dwelling-houses in Morley-rd., proposed by H. G. Puley, Acorn Works, Eastern-ave. West, Romford.

Dagenham.—Factory Extension.—Town planning consent has been given to extension proposed by General Engineering Co, (Ilford), Ltd., of their factory in Roebuck-rd., Hainault industrial estate.

Dagenham.—Factory Premises.—Erection of factory premises in Selinas-la., proposed by Capworth Engineering Co., 126, Fanshawe-ave., Barking, has been granted consent by BC.

Dagenham.—Residential Development.—The use of land in Manor-rd., by Dagenham ex-Servicemen's Housing Society, Ltd., for residential development has been granted BC's consent.

Westminster.—Flats.—Erection of 77 flats is proposed for City C in Churchill-gdns. estate. Architects are Powell & Moya, 42, King-st.

Wimbledon.—Housing.—BS instructed to prepare scheme for erection of old people's dwellings in walled garden of Eagle House, and further block of four flats adjoining housing development now being undertaken. Proposals for two further pairs of houses on Lancaster-rd. site have been approved.

Wimbledon.—School.—Rebuilding and extension of Holy Trinity C.E. School at Effra-rd. have been approved by BC.

Woolwich.—Site Acquisition.—BC are recommended to acquire, clear and redevelop 20-21a, Ropeyard-rails; 80 and 84-87 (consecutive), Woolwich High-st.; and 1-3 (consecutive), Warren-la.

(PROVINCIAL)

Bedlington.—UDC to build 224 houses on site at East View. Plans by S. A. K. Dennis.

Billingham-on-Tees.—UDC approved plans for anhydrite storage buildings extensions at Casebourne Works of ICI, Ltd.

Birmingham.—EC appointed Crouch, Butler & Savage, 67a, New-st., Birmingham, as architects for additional classrooms at Tile Cross neighbourhood.—TC propose erection of 5 blocks of 6-storey flats at Ley Hill, Northfield.

Birmingham.—Ephraim Phillips, Ltd., propose reconstruction and extension of factory at 54-61, Bissell-st.—Lodge Cottrell, Ltd., propose new building at George Street-parade.

Birmingham.—Reg. Hosp. Board propose conversion of Holly-la. Isolation Hospital, Smethwick, into centre for brain surgery, £86,000 estimated cost.

Braunston.—Village Hall Comm. propose erection of new hall.

Brierley Hill.—TC received approval, and work to commence soon on erection of new branch library at Kingswinford.

Catterick.—Site for church at Colburn has been given by J. Roxby Surtes, builder, Catterick Camp. Cost of church estimated £12,000. Vicar, Rev. H. H. Thomson, Hipswell.

Chester.—TC to purchase site south of Plas Newton-la. for housing site.

Chester.—Alterations and improvements at Heath-la. Hosp. for Liverpool Reg. Hosp. Board, £[illegible],315 estimated cost.

Crosby.—BC propose erection of new gram. sch. at Cooks-la. and St. Michaels-rd.

Darlington.—EC seeking permission to begin work next year on first instalment of College of Further Education.

Derbyshire.—Congregational Union propose erection of new churches at Mackworth and Ilkeston.

Durham.—Grammar school to be built at Consett this year. Plans by County A, G. R. Clayton, Court-la., Durham.

Gateshead.—Stormont Main Club and Institute, Low Fell, to build new club premises. Architect, J. Angus, 21, Lovaine-pl., Newcastle.

Gateshead.—Fell Rugby Club, Gateshead, to build new clubhouse. Architect, R. Collins, Russell-bldgs., South Shields.

Gateshead.—R. Burke, Lambton House, Lambton-rd., Jesmond, Newcastle-on-Tyne, prepared plans for RC presbytery at Millway, Gateshead.

Huddersfield.—TC propose erection of further 30 Gregory-type flats.—Approved layout for bungalows for aged at Crosland Lodge estate.—EC propose new infant and junior school at Bradley estate, £86,000 estimated cost.

Keighley.—Methodist Circuit propose erection of church and Sunday-school at Utley.

Leek.—RDC approved erection of 215 houses at Baddeley Green and Brown Edge sites.

Lichfield.—TC propose erection of bungalows at Lower Sandford-st. and dwellings for aged at Partridge Croft.

Liverpool.—Reg. Hosp. Board estimate cost of first stage of new hospital at Greaves Hall, Banks, to be £990,000.

Mansfield (Notts).—TC approved layout plan for 450 houses and six shops in Brick Kiln-la. area.—Scheme being prepared for erection of 10 shops on Ladybrook estate.—Ministry has limited a new housing site to 150 acres east of Black Scotch-la. and north of Old Newark-rd.

Middlesbrough.—EC to begin work during 1954-55 on four new schools and extensions to other schools, cost £680,000.

Middleton.—BC approved plans for fire station and 10 houses at Hollin-la. for Lancs CC; also 24 houses at Penrhyn-ave., Orme-ave. and Rhos-ave., for J. Saxon & Son, 648, Wilmslow-rd., Didsbury.

Newcastle-on-Tyne.—City C to erect 21 houses in Slatyford-la. at £30,210, and 16 in Armstrong-rd. at £24,190. EC's building programme includes four prim. schs., boys' sec. sch. and girls' high sch. Northumberland TA and AF Assoc., Jesmond, plan TA centre on land fronting Benwell-la.—EC approved revised plans and estimates by P. L. Browne, Son & Harding, Pearl-bldgs., Northumberland-st., for proposed Stocksfield-ave. prim. sch., cost £144,000. City C received loan sanction £64,536 for erection of 42 flats in Armstrong-rd., £443,073 for 282 "No Fines" flats in Slatyford-la., £47,850 for 15 houses and 18 flats on Montagu estate, and £394,273 for 48 flats at Fairways, 60 flats at Longbenton, 72 flats on Blakelaw estate, and 84 flats on Montagu estate.

Newcastle-on-Tyne.—Hsg. Comm. to build 21 houses in Slatyford-la., cost £30,200, and 18 in Armstrong-rd., cost over £24,000. Plans by City A, G. Kenyon, 18, Cloth Market.

Newcastle-on-Tyne.—EC approved schemes for six new schools in 1953-4 programme. Plans by City A. G. Kenyon, 18, Cloth Market.

Newcastle-on-Tyne.—Hsg. Comm. had plans approved for nine flats in Buckingham-st., 21 in Guildford-pl. and 12 in Tarset-st. Plans by City A, G. Kenyon, 18, Cloth Market.

Northampton.—BC appointed E. Howard & Son, 20, Derngate, as architects for new administrative block at sewage disposal works.

Northumberland.—TA propose to build centre at Benton, Newcastle. Architects, Cackett, Burns Dick & McKellar, 21, Ellison-pl., Newcastle.

Northumberland.—EC to build school at Killingworth, est. cost £118,000. Plans by County A, C. C. Brown, Newcastle.

Oldham.—EC propose erection of new schools at Holts and Alt estates.

Oswestry.—TC propose erection of dwellings for aged persons at Swan-la.

Penrith.—RDC considering erection of houses at Skelton.

Penwortham.—Lancs CC approved layout for 1,076 dwellings at Kings Fold estate for Preston RDC.

Rochdale.—BC approved plans for 44 houses and 20 garages at Higher Moss estate. Inquiries to Messrs. Gaunt, Foster & Hill, Halifax House, 62-4, Moorgate, EC2.

Sedgley.—UDC approved layout for 150 houses at George-rd. site. Architect, A. Young, 3, Newhall-st., Birmingham.

Skelmersdale.—UDC approved layout for 14 houses and 8 aged persons' dwellings to complete development at Winrows Farm site.

South Shields.—Corpn. to start with rebuilding scheme of blitzed premises around Market-pl. Cost estimated at £100,000. Plans by BE, J. Reid.

Stafford.—TC approved layout for proposed Tillington Hall estate.

Stockport.—Hydes Anvil Brewery Co., Ltd., propose new public-house at Craig-rd.

Stockton-on-Tees.—Durham CC to erect four police houses at Newham Grange, four at Wrens Mill, four on Green-la. estate, four at Fairfield and four on Albany estate.—Stockton Co-op. Soc., Ltd., Wellington-st., seeks site at Roseworth for shops.—Stockton Spinners, Ltd., to build yarn-weighing room in Ross-rd. to plans by E. Austen Johnson, 28, King's Head-bldgs., Cloth Hall-st., Hudders field.—Moorhouse & Barker, builders, Thornaby, to erect houses in Lime-gr., on Fairfield Farm estate to plans by G. P. Stainsby, 57, High-st., Stockton.—L. J. Couves & Partners, Carliol House, Newcastle-on-Tyne, architects for transport depot in Boathouse-la., for North-Eastern Elec. Board.—M. Trotter, 134, High-st., Stockton, architect for RC church in Redhill-rd., for Rev. R. M. Thornton.—BA, T. C. Hartley, 28, The-square, Stockton, prepared plans for 26 houses in Ramsbury-ave. and Ragpath-la.

Sunderland.—Plans approved for tuberculosis occupational therapy centre at Grangetown. Plans by Boro' A, H. Bishop, Grange House, Stockton-rd.

Thornaby-on-Tees.—TC approved plans for children's home in Northumberland-rd. for North Riding CC. County A, H. J. Knowles, County Hall, Northallerton.

Warrington.—RC Authorities propose erection of new church at Orford neighbourhood unit (Rev. Father M. J. Dillon).

"THE BUILDER" PRICES

BRASS AND COPPER TUBES

The Brass and Copper Tube Association have announced that, as from April 1, prices of copper tubes for building services in the popular sizes have been substantially reduced, and have published a revised price list.

The Association has also announced that, as from March 31, in consequence of the fall in the market price of zinc, basis prices of brass products have been reduced as follows :—

	Reduced by per lb.	*Basis price per lb.*
Brazed brass tubes ...	½d.	36½d.
Drawn brass strip sections	½d.	35¼d.

LEAD PAINTS

Associated Lead Manufacturers, Ltd., have announced the following revised basis prices per ton which came into effect as from 8 a.m. April 1 :—

	£	s.	d.
Genuine English dry white lead ...	134	10	0
Genuine ground English white lead ...	156	0	0
Genuine English white lead paint (per gal.)	*2	17	0
Genuine refined English red lead ...	118	5	0
Genuine powdered English litharge ...	118	5	0
Genuine English flake and ground flake litharge	120	15	0
Genuine refined English orange lead ...	130	5	0
Genuine refined English red lead in oil	145	5	0
Genuine English red lead Pt. BS.1011 Type 1 (1 gal. tins)	*2	14	6
English red lead Pt. BS.1011 Type 2 (1 gal. tins)	*2	3	6

* No change.

LEAD SHEET AND PIPES

Associated Lead Manufacturers, Ltd., have also announced the following revised basis prices for sheet lead and lead pipe effective as from 8 a.m. April 2 :—

Delivered England and Wales (*except to undermentioned areas) :—

	£	s.	
Sheet lead	125	10	per ton
Lead pipe	126	15	per ton
Ten-eighty-five lead pipe ...	10	0	per ton extra

* Delivered to Devon, Cornwall, Isle of Man, Isle of Wight and Channel Islands, £1 10s. per ton extra.

SECO
SCAFFOLD
FITTINGS

Swivels, Doubles and Putlog Couplers, Joint Pins, Putlog Ends, Adjustable and Standard Base Plates, etc. **For normal scaffold tube to B.S.S.1139.**

Our DESIGNS give TOP SAFETY—yet you SAVE

SCAFFOLDING PROBLEM?

Specialist advice is yours—FREE. We are as near to you as your telephone.

Clissold 3303-5

SCAFFOLD ERECTION COMPANY LTD

37 SHACKLEWELL LANE, LONDON, E.8

West Hartlepool.—E. M. Lawson, Barras-bridge, Barras Bridge, Newcastle, architect for hotels in Powlett-rd. and at Owton Manor for J. W. Cameron & Co., Ltd.—Clarence Erection Co., Ltd., Church-st., designed factory extension at Longhill Works of Batchelor Robinson & Co.

West Lancs.—RDC seek approval for erection of 40 houses at Carr Mose-la., Halsall.

Whitchurch.—Salop PC Council propose repair and restoration of church, £15,000 estimated cost (Vicar, Rev. J. H. Hall).

Wigan.—TC seek loan £132,450 for erection of 100 houses by direct labour at Worsley Mesnes.

Winchester.—Reg. Hosp. Board approved alterations and adaptations to Clitheroe Hosp. to form accommodation for chronic sick patients, £13,448 estimated cost.

TENDERS

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modification.*
¶ Denotes *accepted by H.M. Government Departments.*

Anglesey.—Erection of Holyhead Voluntary Controlled School, for EC: *Pochin (Contractors), Ltd., King-st., Middlewich.

Barnsley.—Erection of Athersley North School, for EC: *Direct Labour.

Berington.—62 houses at Glenburn-ave. estate, Eastham, for TC: *Unit Construction Co., Ltd., Liverpool.

Billericay.—Erection of 10 houses at Dickens-dr., Laindon, for UDC. H. B. Mayhew, S. Council Offices, 108, High-st.: *A. C. Houston & Co., Ltd., 4, Crown-par., Upminster, Rainham, £19,861.

Billingham-on-Tees. — Additions to Billingham North cty. sch., for Durham CC: *T. M. Stonehouse, Ltd., Osborne-rd., West Hartlepool, £6,497.

Billingham-on-Tees.—Erection of 102 houses for UDC. Architects, Kitching & Co., 21, Albert-rd., Middlesbrough: *G. Wimpey & Co., Ltd., Orchard House, Jesmond, Newcastle-on-Tyne, £146,872.

Birmingham.—Erection of 5 classroom units at Brownmead primary, £16,870; Timberley primary, £17,155; and Hillstone primary, £16,610: *Anglo-Scottish Construction Co., Ltd., London.

Blackwell.—Works for RDC.—182 houses at South Normanton: *Simms, Sons & Cooke, Ltd., Nottingham; 30 houses at Slant-la., Shirebrook: *Henry James, Ltd., Mansfield; 40 houses at Slant-la. North, Shirebrook: *E. C. Rippon, Ltd., Mansfield; roads and sewers on the Hamlet site, South Normanton, 1st ext.: *Gee, Walker & Slater, Ltd., Derby; roads and sewers at Slant-la. North, Shirebrook: *Lane Bros., Mansfield.

Bridgnorth.—Erection of houses on various sites, for RDC: *W. Sharratt, Ltd., Church-la., Wolverhampton.

Buxton.—16 houses at Pictor-rd. and Granby-rd., for TC: *F. Allcock & Sons, 15, Compton-rd., Buxton.

Carlisle.—Works additions, comprising the erection of two more storeys at the Jubilee Block, for Carr & Co., biscuit manufacturers. Architects, Johnston & Wright, Castle-st., Carlisle: *John Laing & Sons, Dalston-rd., Carlisle, £50,000 (work will start about August).

Carlisle.—New offices at Cocklakes, for Carlisle Plaster & Cement Co., Ltd.: *A. S. Nixon, Ltd., Lowther-st., Carlisle.

Clowne.—Four houses at Whitwell, for RDC: *E. A. & H. A. Tomlinson, Ltd., High-st., Befghton, £4,911.

Darlington.—Works additions for the Skerne Works, Ltd., makers of metal pressings. Civil engineering work: *Edgar Lawson, Ltd., Alliance Works, Darlington. Structural steelwork: *J. Shewell & Co., Ltd., Albert Hill Bridge Works, Darlington.

Durham.—Erection of additional classrooms at Barnard Castle mod. sch., for CC: *Thomas Lee & Son, Barnard Castle, £6,197.

Glendale.—Work has started on the erection of 20 houses at Millfield, for RDC. Surveyor, A. R. Field, Council Offices, Wooler: *T. Fairnington & Sons, Branxton, Northumberland.

Keighley.—100 non-traditional type houses at Long Lee, for Keighley TC: *F. Shepherd & Son, Ltd., Blue Bridge-la., York.

Kidderminster.—Erection of police station, 24 houses and a new road at Blakebrook, for Worcs CC: *A. H. Guest, Ltd., Coalbourne Brook, Stourbridge.

Liverpool.—Houses, for T.C., 796 and 90 garages at Croxteth estate, and 602 and 79 garages at Kirkby: *Unit Construction Co., Ltd., Liverpool, £1,176,985 and £862,424.

London (British Railways).—New contracts placed by London Midland region :—

Reconstruction of bridge No. 3 carrying road A.50 over the railway at Coalville on the Charnwood Forest line: *Fletcher & Co. (Contractors), Ltd., Forest-rd., Mansfield, Notts. Repairs and reglazing

of the roof of the transhipshed at Ardwick East depot, Manchester: E. R. Dyer, Ltd., 25, Brazenose-st., Manchester. Drainage and clay-digging on the down line between 157 miles 880 yards and 158 miles 440 yards, and the stabilisation of the cutting slope on the up side 157 miles 1,387 yards, Quainton-rd.-Calvert, on the ex-GC main line: Leonard Fairclough, Ltd., Terminal House, Grosvenor-gdns., SW1. Labour only for the cleaning and painting of Leicester (London-rd) passenger station: Alfred Bagnall & Sons, Ltd., 7, Market-st., Shipley, Yorks.

Formation renewal and stabilisation of the cutting slope at Verney Junction between 9 miles 1,300 yards to 10 miles 470 yards on the Bletchley-Oxford line: Leonard Fairclough, Ltd., Terminal House, Grosvenor-gdns., SW1. Labour only for the cleaning and painting of 11 bridges on the Manchester, South Junction and Altrincham line: Clarke & Son (Wigan), Ltd., 28a, Mesnes-rd., Wigan, Lancs.

¶**London (War Dept.).**—Works contracts placed by WD during week ended March 28:—

Leicestershire: Miscellaneous, John Bowen & Sons, Ltd., Birmingham. *Nottinghamshire*: Miscellaneous, C. V. Russell & Son, Collingham; miscellaneous, Charles Tack (Builders), Ltd., Mansfield. *Denbighshire*: Road repairs, Asphalte & Public Works, Ltd., Worcester. *Wiltshire*: Air conditioning, Arthur Scull & Son, Ltd., Bristol. *Hertfordshire*: Hutting, Macmanus & Co., Ltd., Whetstone, N20. *Sussex*: Painting and decorating, D. Humberstone & Co., Louth, Lincs. *London*: Miscellaneous, Cawood Wharton Co., Ltd., Greenwich; miscellaneous, J. Garrett & Son, Ltd., Balham-hill, SW12; painting, Arnold Sharrocks, Ltd., Rochdale.

Manchester.—203 houses at Peel Hall, Wythenshawe, and 12 flats at Hillside, Blackley, for TC: *Direct Labour.

Mansfield Woodhouse.—18 houses at Coxs-la. estate, for UDC: *Direct Labour, £23,206. 14 houses at Clipstone Camp site: *Sweeney & Palmer, Ltd., Aspley, Nottingham, £16,630.

Middlesbrough.—Erection of a county primary school at Middlesbrough at an est. cost of £84,500: *Leslie & Co., Darlington.

Morpeth.—Erection of a school at Gallowhill, nr. Morpeth, est. to cost £50,000, for Northumberland Ed. Com. Plans by the County A. County Hall, Newcastle: *Havery & Co., 38, The Side, Newcastle-on-Tyne.

Morpeth.—County school at Stobhill Gate, Morpeth, est. to cost £70,000. Plans by the County A. County Hall, Newcastle-on-Tyne: * Alex Anderson (Contractors), Ltd., Stanmore-rd., Newcastle-on-Tyne.

Newburn.—Erection of a county modern school, est. to cost £140,000, at Newburn, Northumberland. Plans by the County A, County Hall, Newcastle: *Leslie & Co., Darlington.

Northumberland.—Erection of pithead baths at Pegswood, Northumberland: *George Henderson, Bo.don-la., East Boldon, Co. Durham.

Nuneaton.—101 and 50 houses at Camp Hill estate, for TC: *Coltman & Sons (Coventry), Ltd., £124,181; *F. H. Pallatt, Ltd., £61,779.

Rainford.—Six bungalows at Bank Villas site, for UDC: *P. P. Heyes, Rainford, £6,246.

Rotherham.—New offices at Psalters-la., for H. Whiting & Son: *Direct Labour.

Seaford.—24 houses at Chyngton housing estate, for UDC. C. Thompson, E&S, Municipal-bldgs.: *Ringmer Building Works, Ltd., Ringmer, Lewes, Sussex, £32,566 (subject to Ministry approval).

Sheffield.—24 houses at Hackenthorpe estate (scheme 3b, section 38), for TC: *Bailey & Martyn, Ltd., Sheffield (in lieu of previous tender).

Smethwick.—Nine houses on three sites, for BC: *David Charles, Ltd., 220, Cooksey-rd., Birmingham, £13,330.

South Shields.—Erection of 77 houses at Simonside, for TC. John Reid, BE: *W. D. & R. Allison, Whitburn, South Shields.

Stockton-on-Tees.—Erection of 26 houses at Roseworth, for T.C.: *Moore & Cartwright, 15, Mount Pleasant-rd., Stockton, £34,007.

Sunderland.—Erection of 66 houses at Castletown, for TC. Boro' A, H. C. Bishop, Grange House, Stockton-rd., Sunderland: *W. Wigham & Son, Hylton, Co. Durham, £87,017.

Sunderland.—Conversion of Hylton-rd. tramsheds into bus depot for 50 to 60 buses, for TC. BE, J. E. Lewis, 27, Fawcett-st, Sunderland: *Direct Labour, £32,690.

Sunderland.—Erection of 50 houses at Castletown, for TC. Boro' A, H. C. Bishop, Grange House, Stockton-rd., Sunderland: *T. D. Gibbons & Son, 15, Hendon Burn-ave., Sunderland, £58,993.

Tipton.—32 flats and 44 houses at Dudley Port site, for BC: *Direct Labour, £94,499.

Tynemouth.—Erection of 142 houses at Chirton Grange South, for TC. BE, D. M. O'herlihy, 16, Northumberland-sq., North Shields: *J. H. Rogers, Regent-ter., North Shields, £222,346.

Uttoxeter.—12 houses at Stramshall, for RDC: *T. H. Stewart, Ltd., £17,565.

Wallasey.—Erection of Birket primary school, for EC: *G. & J. Seddon, Ltd., Little Hulton, nr. Bolton, Lancs.

Wigan.—Erection of Springfield RC secondary school, for RC Authorities: *J. Moss & Sons, Ltd., Pennington-rd., Saw Mills, Leigh, Lancs.

Wolverhampton.—16 dwellings at Wednesfield site, for BC: *A. Poole, Son & Co., Hadrian-chbrs., Skinner-st., Wolverhampton.

FEDERATION OF MASTER BUILDERS

IF YOU ARE A BUILDER IN

YORKS · DERBYS · LINCS NOTTS or RUTLAND

JOIN THE

FEDERATION OF MASTER BUILDERS

BRANCHES ESTABLISHED IN MANY CENTRES OF THE ABOVE COUNTIES FORM THE YORKSHIRE REGION

Subscription £5.5.0 Per annum

YOU SHOULD BE A MEMBER OF THIS TRULY REPRESENTATIVE ORGANISATION WHICH SPEAKS WITH THE VOICE OF OVER 10,000 MEMBERS

PHONE OR WRITE TO
THE REGIONAL SECRETARY
7 BASINGHALL BUILDINGS
BUTTS COURT, LEEDS, 1
Tel.: LEEDS 24799

CHANNELS by BROADS
for CATALOGUE AND TECHNICAL SERVICE
Phone: PADdington 7061 (20 lines)
Write: SOUTH WHARF, PADDINGTON, W.2

WOOD BLOCK FLOORS
STEVENS & ADAMS LTD.
Victoria Works,
Point Pleasant, Wandsworth, S.W.18

THE ESSEX STEEL SCAFFOLDING Co LTD
SALES, HIRE
ERECTION
CRADLES
9A HIGH BEECH ROAD
LOUGHTON ESSEX
TEL: LOUGHTON 5022

W & M NEGUS LTD
Building Contractors
Station Works, King James St., Southwark, S.E.1.
Telephone:— Waterloo 5474 (3 lines)

GALBRAITH
BROTHERS LIMITED
BUILDERS
CONTRACTORS
& ENGINEERS
Registered Office: 61 BARTHOLOMEW CLOSE E.C.1 MONarch 7597-8
Works: CRAYFORD BRIDGE KENT Bexleyheath 3651-4